Thank You

for your purchase of one of the finest outboards available. You have made a sound investment in boating pleasure. Your outboard has been manufactured by Mercury Marine, a world leader in marine technology and outboard manufacturing since 1939. These years of experience have been committed to the goal of producing the finest quality products. This led to Mercury Marine's reputation for strict quality control, excellence, durability, lasting performance and being the best at providing after the sale support.

Please read this manual carefully before operating your outboard. This manual has been prepared to assist you in the operation, safe use and care of your outboard.

All of us at Mercury Marine took pride in building your outboard and wish you many years of happy and safe boating.

Again, thank you for your confidence in Mercury Marine.

EPA Emissions Regulations

Outboards sold by Mercury Marine in the United States are certified to the United States Environmental Protection Agency as conforming to the requirements of the regulations for the control of air pollution from new outboard motors. This certification is contingent on certain adjustments being set to factory standards. For this reason, the factory procedure for servicing the product must be strictly followed and, wherever practicable, returned to the original intent of the design. **Maintenance, replacement, or repair of the emission control devices and systems may be performed by any marine engine repair establishment or individual.**

Engines are labeled with an Emission Control Information decal as permanent evidence of EPA certification.

⚠ WARNING

The engine exhaust from this product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

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Warranty Message

The product you have purchased comes with a **limited warranty** from Mercury Marine, the terms of the warranty are set forth in the **Warranty Information** Section of this manual. The warranty statement contains a description of what is covered, what is not covered, the duration of coverage, how to best obtain warranty coverage, **important disclaimers and limitations of damages,** and other related information. Please review this important information.

The description and specifications contained herein were in effect at the time this manual was approved for printing. Mercury Marine, whose policy is one of continued improvement, reserves the right to discontinue models at any time, to change specifications, designs, methods, or procedures without notice and without incurring obligation.

Mercury Marine, Fond du Lac, Wisconsin U.S.A.

Litho in U.S.A.

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Mercury, Mercury Marine, MerCruiser, Mercury MerCruiser, Mercury Racing, Mercury Precision Parts, Mercury Propellers, Mariner, Quicksilver, #1 On The Water, Alpha, Bravo, Pro Max, OptiMax, Sport-Jet, K-Planes, MerCathode, RideGuide, SmartCraft, Zero Effort, M with Waves logo, Mercury with Waves logo, and SmartCraft logo are all registered trademarks of Brunswick Corporation. Mercury Product Protection logo is a registered service mark of Brunswick Corporation.

Declaration of Conformity - Outboard, Conventional 2-Stroke

Manufacturer:

Tohatsu Marine Corporation (TMC)
Mercury Marine Joint Venture
Shimodaira 4495-9, Komagane-City,
Nagano, Japan 399-4101

Authorized Representative:

Brunswick Marine in EMEA Inc.
Parc Industriel De Petit-Rechain,
B-2800 Verviers, Belgium

Safety of Machinery Directive 98/37/EC

Principles of safety integration (1.1.2)	ISO 12100-1; ISO 12100-2; EN 1050
Noise (1.5.8)	ICOMIA 39/94
Vibration (1.5.9)	ICOMIA 38/94

Engine type: Outboard
Fuel type: Gasoline
Combustion cycle: 2-Stroke

This declaration is issued under the sole responsibility of Mercury Marine and Brunswick Marine in EMEA Inc.

Name and function:

Mark D. Schwabero
President, Mercury Marine, Fond du Lac, WI USA

Date and place of issue:
November 20, 2008
Mercury Marine, Fond du Lac, WI USA
European Regulations Contact:
Regulations and Product Safety Department,
Mercury Marine, Fond du Lac, WI USA

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WARRANTY INFORMATION

Transfer of Warranty

The limited warranty is transferable to a subsequent purchaser, but only for the remainder of the unused portion of the limited warranty. This will not apply to products used for commercial applications.

To transfer the warranty to the subsequent owner, send or fax a copy of the bill of sale or purchase agreement, new owner's name, address and engine serial number to Mercury Marine's warranty registration department. In the United States and Canada, mail to:

Mercury Marine
Attn: Warranty Registration Department
W6250 W. Pioneer Road
P.O. Box 1939
Fond du Lac, WI 54936-1939
920-929-5054
Fax +1 920 929 5893

Upon processing the transfer of warranty, Mercury Marine will send registration verification to the new owner of the product by mail.

There is no charge for this service.

For products purchased outside the United States and Canada, contact the distributor in your country, or the Marine Power Service Center closest to you.

Warranty Registration United States and Canada

1. You may change your address at any time, including at time of warranty claim, by calling Mercury Marine or sending a letter or fax with your name, old address, new address, and engine serial number to Mercury Marine's warranty registration department. Your dealer can also process this change of information.
   Mercury Marine
   Attn: Warranty Registration Department
   W6250 Pioneer Road
   P.O. Box 1939
   Fond du Lac, WI 54936-1939
   920-929-5054
   Fax 920-929-5893

WARRANTY INFORMATION

NOTE: *Registration lists must be maintained by Mercury Marine and any dealer on marine products sold in the United States, should a safety recall notification under the Federal Safety Act be required.*

2. To be eligible for warranty coverage, the product must be registered with Mercury Marine. At the time of sale, the dealer should complete the warranty registration and immediately submit it to Mercury Marine via MercNET, E-mail, or mail. Upon receipt of this warranty registration, Mercury Marine will record the registration.
3. Upon processing the warranty registration, Mercury Marine will send registration verification by mail to the purchaser of the product. If this registration verification is not received within 30 days, please contact your selling dealer immediately. Warranty coverage is not effective until your product is registered with Mercury Marine.

Warranty Registration Outside the United States and Canada

1. It is important that your selling dealer fills out the Warranty Registration Card completely and mails it to the distributor or Marine Power Service Center responsible for administering the warranty registration/claim program for your area.
2. The Warranty Registration Card identifies your name and address, product model and serial numbers, date of sale, type of use and the selling distributor's/dealer's code number, name and address. The distributor/dealer also certifies that you are the original purchaser and user of the product.
3. A copy of the Warranty Registration Card, designated as the Purchaser's Copy, MUST be given to you immediately after the card has been completely filled out by the selling distributor/dealer. This card represents your factory registration identification and should be retained by you for future use when required. Should you ever require warranty service on this product, your dealer may ask you for the Warranty Registration Card to verify date of purchase and to use the information on the card to prepare the warranty claim forms.

4. In some countries, the Marine Power Service Center will issue you a permanent (plastic) Warranty Registration Card within 30 days after receiving the Factory Copy of the Warranty Registration Card from your distributor/dealer. If you receive a plastic Warranty Registration Card, you may discard the Purchaser's Copy that you received from the distributor/dealer when you purchased the product. Ask your distributor/dealer if this plastic card program applies to you.

IMPORTANT: Registration lists must be maintained by the factory and dealer in some countries by law. It is our desire to have ALL products registered at the factory should it ever be necessary to contact you. Make sure your dealer/distributor fills out the warranty registration card immediately and sends the factory copy to the Marine Power International Service Center for your area.

5. For further information concerning the Warranty Registration Card and its relationship to Warranty Claim processing, refer to the International Warranty.

FourStroke Outboard Limited Warranty United States, Canada, Europe and Confederation of Independent States

Outside the United States, Canada, Europe and Confederation of Independent States - check with local distributor.

WHAT IS COVERED: Mercury Marine warrants its new products to be free of defects in material and workmanship during the period described below.

WARRANTY INFORMATION

DURATION OF COVERAGE: This Limited Warranty provides coverage for two (2) years from the date the product is first sold to a recreational use retail purchaser, or the date on which the product is first put into service, whichever occurs first. Commercial users of these products receive warranty coverage of one (1) year from the date of first retail sale, or one (1) year from the date in which the product was first put into service, whichever occurs first. Commercial use is defined as any work or employment related use of the product, or any use of the product which generates income, for any part of the warranty period, even if the product is only occasionally used for such purposes. The repair or replacement of parts, or the performance of service under this warranty, does not extend the life of this warranty beyond its original expiration date. Unexpired warranty coverage can be transferred from one recreational use customer to a subsequent recreational use customer upon proper re–registration of the product. Unexpired warrant coverage cannot be transferred either to or from a commercial use customer. Warranty coverage may be terminated for used or repossessed product; or product purchased at auction, from a slvage yard, or from an insurance company.

CONDITIONS THAT MUST BE MET IN ORDER TO OBTAIN WARRANTY COVERAGE: Warranty coverage is available only to retail customers that purchase from a Dealer authorized by Mercury Marine to distribute the product in the country in which the sale occurred, and then only after the Mercury Marine specified pre–delivery inspection process is completed and documented. Warranty coverage becomes available upon proper registration of the product by the authorized dealer. Routine maintenance outlined in the Operation and Maintenance Manual must be timely performed in order to maintain warranty coverage. Mercury Marine reserves the right to make future warranty coverage contingent on proof of proper maintenance.

WHAT MERCURY WILL DO: Mercury's sole and exclusive obligation under this warranty is limited to, at our option, repairing a defective part, replacing such part or parts with new or Mercury Marine certified remanufactured parts, or refunding the purchase price of the Mercury product. Mercury reserves the right to improve or modify products from time to time without assuming an obligation to modify products previously manufactured.

WARRANTY INFORMATION

HOW TO OBTAIN WARRANTY COVERAGE: The customer must provide Mercury with a reasonable opportunity to repair, and reasonable access to the product for warranty service. Warranty claims shall be made by delivering the product for inspection to a Mercury dealer authorized to service the product. If purchaser cannot deliver the product to such a dealer, written notice must be given to Mercury. We will then arrange for the inspection and any covered repair. Purchaser in that case shall pay for all related transportation charges and/or travel time. If the service provided is not covered by this warranty, purchaser shall pay for all related labor and material, and any other expenses associated with that service. Purchaser shall not, unless requested by Mercury, ship the product or parts of the product directly to Mercury. Proof of registered ownership must be presented to the dealer at the time warranty service is requested in order to obtain coverage.

WHAT IS NOT COVERED: This limited warranty does not cover routine maintenance items, tune ups, adjustments, normal wear and tear, damage caused by abuse, abnormal use, use of a propeller or gear ratio that does not allow the engine to run in its recommended wide open throttle RPM range (see the Operation and Maintenance Manual), operation of the product in a manner inconsistent with the recommended operation/duty cycle section of the Operation and Maintenance Manual, neglect, accident, submersion, improper installation (proper installation specifications and techniques are set forth in the installation instructions for the product), improper service, use of an accessory or part not manufactured or sold by us, jet pump impellers and liners, operation with fuels, oils or lubricants which are not suitable for use with the product (see the Operation and Maintenance Manual), alteration or removal of parts, or water entering the engine through the fuel intake, air intake or exhaust system, or damage to the product from insufficient cooling water caused by blockage of the cooling system by a foreign body, running the engine out of water, mounting the engine too high on the transom, or running the boat with the engine trimmed out too far.. Use of the product for racing or other competitive activity, or operating with a racing type lower unit, at any point, even by a prior owner of the product, voids the warranty.

Expenses related to haul out, launch, towing, storage, telephone, rental, inconvenience, slip fees, insurance coverage, loan payments, loss of time, loss of income, or any other type of incidental or consequential damages are not covered by this warranty. Also, expenses associated with the removal and/or replacement of boat partitions or material caused by boat design for access to the product are not covered by this warranty.

No individual or entity, including Mercury Marine authorized dealers, has been given authority by Mercury Marine to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against Mercury Marine.

For additional information regarding events and circumstances covered by this warranty, and those that are not, see the Warranty Coverage section of the Operation and Maintenance Manual, incorporated by reference into this warranty.

DISCLAIMERS AND LIMITATIONS:
THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME STATES/COUNTRIES DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH VARY FROM STATE TO STATE AND COUNTRY TO COUNTRY.

FourStroke Outboard Limited Warranty (Middle-East, and Africa)

WHAT IS COVERED: Mercury Marine warrants its new Outboard and Jet Products to be free of defects in material and workmanship during the period described below.

WARRANTY INFORMATION

DURATION OF COVERAGE: This Limited Warranty provides coverage for one (1) year from the date the product is first sold to a recreational use retail purchaser, or the date on which the product is first put into service, whichever occurs first. Commercial users of these products receive warranty coverage of one (1) years from the date of first retail sale, or one (1) year from the date on which the product was first put into service, whichever occurs first. Commercial use is defined as any work or employment related use of the product, or any use of the product which generates income, for any part of the warranty period, even if the product is only occasionally used for such purposes. The repair or replacement of parts, or the performance of service under this warranty, does not extend the life of this warranty beyond its original expiration date. Unexpired warranty coverage can be transferred from one recreational use customer to a subsequent recreational use customer upon proper re-registration of the product. Unexpired warranty coverage cannot be transferred either to or from a commercial use customer.

CONDITIONS THAT MUST BE MET IN ORDER TO OBTAIN WARRANTY COVERAGE: Warranty coverage is available only to retail customers that purchase from a Dealer authorized by Mercury Marine to distribute the product in the country in which the sale occurred, and then only after the Mercury Marine specified pre–delivery inspection process is completed and documented. Warranty coverage becomes available upon proper registration of the product by the authorized dealer. Routine maintenance outlined in the Operation and Maintenance Manual must be timely performed in order to maintain warranty coverage. Mercury Marine reserves the right to make warranty coverage contingent on proof of proper maintenance.

WHAT MERCURY WILL DO: Mercury's sole and exclusive obligation under this warranty is limited to, at our option, repairing a defective part, replacing such part or parts with new or Mercury Marine certified re–manufactured parts, or refunding the purchase price of the Mercury product. Mercury reserves the right to improve or modify products from time to time without assuming an obligation to modify products previously manufactured.

WARRANTY INFORMATION

HOW TO OBTAIN WARRANTY COVERAGE: The customer must provide Mercury with a reasonable opportunity to repair, and reasonable access to the product for warranty service. Warranty claims shall be made by delivering the product for inspection to a Mercury dealer authorized to service the product. If purchaser cannot deliver the product to such a dealer, written notice must be given to Mercury. We will then arrange for the inspection and any covered repair. Purchaser in that case shall pay for all related transportation charges and/or travel time. If the service provided is not covered by this warranty, purchaser shall pay for all related laborand material, and any other expenses associated with that service. Purchaser shall not, unless requested by Mercury, ship the product or parts of the product directly to Mercury. Proof of registered ownership must be presented to the dealer at the time warranty service is requested in order to obtain coverage.

WHAT IS NOT COVERED: This limited warranty does not cover routine maintenance items, tune ups, adjustments, normal wear and tear, damage caused by abuse, abnormal use, use of a propeller or gear ratio that does not allow the engine to run in its recommended wide open throttle RPM range (see the Operation and Maintenance Manual), operation of the product in a manner inconsistent with the recommended operation/duty cycle section of the Operation and Maintenance Manual, neglect, accident, submersion, improper installation (proper installation specifications and techniques are set forth in the installation instructions for the product), improper service, use of an accessory or part not manufactured or sold by us, jet pump impellers and liners, operation with fuels, oils or lubricants which are not suitable for use with the product (see the Operation and Maintenance Manual), alteration or removal of parts, or water entering the engine through the fuel intake, air intake or exhaust system, or damage to the product from insufficient cooling water caused by blockage of the cooling system by foreign body, running the engine out of water, mounting the engine too high on the transom, or running the boat with the engine trimmed out too far.

Use of the product for racing or other competitive activity, or operating with a racing type lower unit, at any point, even by a prior owner of the product, voids the warranty.

WARRANTY INFORMATION

Expenses related to haul out, launch, towing, storage, telephone, rental, inconvenience, slip fees, insurance coverage, loan payments, loss of time, loss of income, or any other type of incidental or consequential damages are not coveredby this warranty. Also, expenses associated with the removal and/or replacement of boat partitions or material caused by boat design for access to the product are not covered by this warranty.

No individual or entity, including Mercury Marine authorized dealers, has been given authority by Mercury Marine to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against Mercury Marine.

For additional information regarding events and circumstances covered by this warranty, and those that are not, see the Warranty Coverage section of the Operation and Maintenance Manual, incorporated by reference into this warranty.

DISCLAIMERS AND LIMITATIONS:
THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME STATES/COUNTRIES DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH VARY FROM STATE TO STATE AND COUNTRY TO COUNTRY.

3 Year Limited Warranty Against Corrosion

WHAT IS COVERED: Mercury Marine warrants that each new Mercury, Mariner, Mercury Racing, Sport Jet, M^2 Jet Drive, Tracker by Mercury Marine Outboard, Mercury MerCruiser Inboard or Sterndrive Engine (Product) will not be rendered inoperative as a direct result of corrosion for the period of time described below.

WARRANTY INFORMATION

DURATION OF COVERAGE: This limited corrosion warranty provides coverage for three (3) years from either the date the product is first sold, or the date on which the product is first put into service, whichever occurs first. The repair or replacement of parts, or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date. Unexpired warranty coverage can be transferred to subsequent (noncommercial use) purchaser upon proper reregistration of the product.

CONDITIONS THAT MUST BE MET IN ORDER TO OBTAIN WARRANTY COVERAGE: Warranty coverage is available only to retail customers that purchase from a Dealer authorized by Mercury Marine to distribute the product in the country in which the sale occurred, and then only after the Mercury Marine specified predelivery inspection process is completed and documented. Warranty coverage becomes available upon proper registration of the product by the authorized dealer. Corrosion prevention devices specified in the Operation and Maintenance Manual must be in use on the boat, and routine maintenance outlined in the Operation and Maintenance Manual must be timely performed (including without limitation the replacement of sacrificial anodes, use of specified lubricants, and touch-up of nicks and scratches) in order to maintain warranty coverage. Mercury Marine reserves the right to make warranty coverage contingent upon proof of proper maintenance.

WHAT MERCURY WILL DO: Mercury's sole and exclusive obligation under this warranty is limited to, at our option, repairing a corroded part, replacing such part or parts with new or Mercury Marine certified remanufactured parts, or refunding the purchase price of the Mercury product. Mercury reserves the right to improve or modify products from time to time without assuming an obligation to modify products previously manufactured.

WARRANTY INFORMATION

HOW TO OBTAIN WARRANTY COVERAGE: The customer must provide Mercury with a reasonable opportunity to repair, and reasonable access to the product for warranty service. Warranty claims shall be made by delivering the product for inspection to a Mercury dealer authorized to service the product. If purchaser cannot deliver the product to such a dealer, written notice must be given to Mercury. We will then arrange for the inspection and any covered repair. Purchaser in that case shall pay for all related transportation charges and/or travel time. If the service provided is not covered by this warranty, purchaser shall pay for all related labor and material, and any other expenses associated with that service. Purchaser shall not, unless requested by Mercury, ship the product or parts of the product directly to Mercury. Proof of registered ownership must be presented to the dealer at the time warranty service is requested in order to obtain coverage.

WHAT IS NOT COVERED: This limited warranty does not cover electrical system corrosion; corrosion resulting from damage, corrosion which causes purely cosmetic damage, abuse or improper service; corrosion to accessories, instruments, steering systems; corrosion to factory installed jet drive unit; damage due to marine growth; product sold with less than a one year limited Product warranty; replacement parts (parts purchased by customer); products used in a commercial application. Commercial use is defined as any work or employment related use of the product, or any use of the product which generates income, for any part of the warranty period, even if the product is only occasionally used for such purposes.

WARRANTY INFORMATION

Corrosion damage caused by stray electrical currents (on-shore power connections, nearby boats, submerged metal) is not covered by this corrosion warranty and should be protected against by the use of a corrosion protection system, such as the Mercury Precision Parts or Quicksilver MerCathode system and/or Galvanic Isolator. Corrosion damage caused by improper application of copper base anti-fouling paints is also not covered by this limited warranty. If anti-fouling protection is required, Tri-Butyl-Tin-Adipate (TBTA) base anti-fouling paints are recommended on Outboard and MerCruiser boating applications. In areas where TBTA base paints are prohibited by law, copper base paints can be used on the hull and transom. Do not apply paint to the outboard or MerCruiser product. In addition, care must be taken to avoid an electrical interconnection between the warranted product and the paint. For MerCruiser product, an unpainted gap of at least 38 mm (1.5 in.) should be left around the transom assembly. Refer to the Operation and Maintenance Manual for additional details.

For additional information regarding events and circumstances covered by this warranty, and those that are not, see the Warranty Coverage section of the Operation and Maintenance Manual, incorporated by reference into this warranty.

DISCLAIMERS AND LIMITATIONS:

THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME STATES/COUNTRIES DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH VARY FROM STATE TO STATE AND COUNTRY TO COUNTRY.

WARRANTY INFORMATION

Warranty Coverage and Exclusions

The purpose of this section is to help eliminate some of the more common misunderstandings regarding warranty coverage. The following information explains some of the types of services that are not covered by warranty. The provisions set forth following have been incorporated by reference into the Three Year Limited Warranty Against Corrosion Failure, the International Limited Outboard Warranty, and the United States and Canada Limited Outboard Warranty.

Keep in mind that warranty covers repairs that are needed within the warranty period because of defects in material and workmanship. Installation errors, accidents, normal wear, and a variety of other causes that affect the product are not covered.

Warranty is limited to defects in material or workmanship, but only when the consumer sale is made in the country to which distribution is authorized by us.

Should you have any questions concerning warranty coverage, contact your authorized dealer. They will be pleased to answer any questions that you may have.

GENERAL EXCLUSIONS FROM WARRANTY

1. Minor adjustments and tune-ups, including checking, cleaning, or adjusting spark plugs, ignition components, carburetor settings, filters, belts, controls, and checking lubrication made in connection with normal services.
2. Factory installed jet drive units - Specific parts excluded from the warranty are: the jet drive impeller and jet drive liner damaged by impact or wear, and water damaged driveshaft bearings as a result of improper maintenance.
3. Damage caused by neglect, lack of maintenance, accident, abnormal operation, or improper installation or service.
4. Haul-out, launch, towing charges, removal and/or replacement of boat partitions or material because of boat design for necessary access to the product, all related transportation charges and/or travel time, etc. Reasonable access must be provided to the product for warranty service. Customer must deliver product to an authorized dealer.

5. Additional service work requested by customer other than that necessary to satisfy the warranty obligation.
6. Labor performed by other than an authorized dealer may be covered only under the following circumstances: when performed on emergency basis (providing there are no authorized dealers in the area who can perform the work required or have no facilities to haul-out, etc., and prior factory approval has been given to have the work performed at this facility).
7. All incidental and/or consequential damages (storage charges, telephone or rental charges of any type, inconvenience or loss of time or income) are the owner's responsibility.
8. Use of other than Mercury Precision or Quicksilver parts when making warranty repairs.
9. Oils, lubricants, or fluids changed as a matter of normal maintenance is customer's responsibility unless loss or contamination of same is caused by product failure that would be eligible for warranty consideration.
10. Participating in or preparing for racing or other competitive activity or operating with a racing type lower unit.
11. Engine noise does not necessarily indicate a serious engine problem. If diagnosis indicates a serious internal engine condition which could result in a failure, condition responsible for noise should be corrected under the warranty.
12. Lower unit and/or propeller damage caused by striking a submerged object is considered a marine hazard.
13. Water entering engine through the fuel intake, air intake, or exhaust system or submersion.
14. Failure of any parts caused by lack of cooling water, which results from starting motor out of water, foreign material blocking inlet holes, motor being mounted too high, or trimmed too far out.
15. Use of fuels and lubricants which are not suitable for use with or on the product. Refer to the **Maintenance** section.

WARRANTY INFORMATION

16. Our limited warranty does not apply to any damage to our products caused by the installation or use of parts and accessories which are not manufactured or sold by us. Failures which are not related to the use of those parts or accessories are covered under warranty if they otherwise meet the terms of the limited warranty for that product.

GENERAL INFORMATION

Boater's Responsibilities

The operator (driver) is responsible for the correct and safe operation of the boat and safety of its occupants and general public. It is strongly recommended that each operator (driver) read and understand this entire manual before operating the outboard.

Be sure at least one additional person onboard is instructed in the basics of starting and operating the outboard and boat handling in case the driver is unable to operate the boat.

Before Operating Your Outboard

Read this manual carefully. Learn how to operate your outboard properly. If you have any questions, contact your dealer.

Safety and operating information that is practiced, along with using good common sense, can help prevent personal injury and product damage.

This manual as well as safety labels posted on the outboard use the following safety alerts to draw your attention to special safety instructions that should be followed.

⚠ DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates a situation which, if not avoided, could result in engine or major component failure.

Boat Horsepower Capacity

⚠ WARNING

Exceeding the boat's maximum horsepower rating can cause serious injury or death. Overpowering the boat can affect boat control and flotation characteristics or break the transom. Do not install an engine that exceeds the boat's maximum power rating.

Do not overpower or overload your boat. Most boats will carry a required capacity plate indicating the maximum acceptable power and load as determined by the manufacturer following certain federal guidelines. If in doubt, contact your dealer or the boat manufacturer.

U.S. COAST GUARD CAPACITY	
MAXIMUM HORSEPOWER	XXX
MAXIMUM PERSON CAPACITY (POUNDS)	XXX
MAXIMUM WEIGHT CAPACITY	XXX

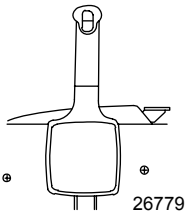
26777

Outboard Remote Control Models

The remote control connected to your outboard must be equipped with a start in neutral only protection device. This prevents the engine from starting when the shift is actuated in any position other than neutral.

⚠ WARNING

Starting the engine with the drive in gear can cause serious injury or death. Never operate a boat that does not have a neutral-safety-protection device.

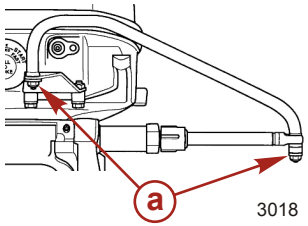


Remote Steering Notice

⚠ WARNING

Improper fasteners or improper installation procedures can result in loosening or disengagement of the steering link rod. This can cause a sudden, unexpected loss of boat control, resulting in serious injury or death due to occupants being thrown within or out of the boat. Always use required components and follow instructions and torque procedures.

The steering link rod that connects the steering cable to the engine must be fastened utilizing self-locking nuts. These self-locking nuts must never be replaced with common nuts (non-locking) as they will work loose and vibrate off, freeing the link rod to disengage.

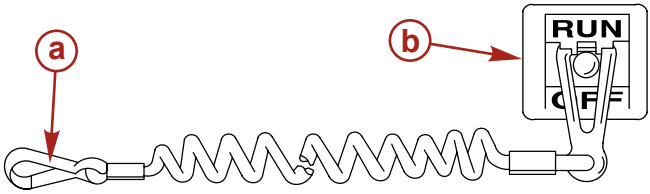


a - Self-locking nuts

Lanyard Stop Switch

The purpose of a lanyard stop switch is to turn off the engine when the operator moves far enough away from the operator's position (as in accidental ejection from the operator's position) to activate the switch. Tiller handle outboards and some remote control units are equipped with a lanyard stop switch. A lanyard stop switch can be installed as an accessory - generally on the dashboard or side adjacent to the operator's position.

The lanyard is a cord usually 122–152 cm (4–5 feet) in length when stretched out, with an element on one end made to be inserted into the switch and a snap on the other end for attaching to the operator. The lanyard is coiled to make its at-rest condition as short as possible to minimize the likelihood of lanyard entanglement with nearby objects. Its stretched-out length is made to minimize the likelihood of accidental activation should the operator choose to move around in an area close to the normal operator's position. If it is desired to have a shorter lanyard, wrap the lanyard around the operator's wrist or leg, or tie a knot in the lanyard.



21629

a - Lanyard cord **b -** Lanyard stop switch

Read the following Safety Information before proceeding.

GENERAL INFORMATION

Important Safety Information: The purpose of a lanyard stop switch is to stop the engine when the operator moves far enough away from the operator's position to activate the switch. This would occur if the operator accidentally falls overboard or moves within the boat a sufficient distance from the operator's position. Falling overboard and accidental ejections are more likely to occur in certain types of boats such as low sided inflatables, bass boats, high performance boats, and light, sensitive handling fishing boats operated by a hand tiller. Falling overboard and accidental ejections are also likely to occur as a result of poor operating practices such as sitting on the back of the seat or gunwale at planing speeds, standing at planing speeds, sitting on elevated fishing boat decks, operating at planing speeds in shallow or obstacle infested waters, releasing your grip on a steering wheel or tiller handle that is pulling in one direction, drinking alcohol or consuming drugs, or daring high speed boat maneuvers.

While activation of the lanyard stop switch will stop the engine immediately, a boat will continue to coast for some distance depending upon the velocity and degree of any turn at shut down. However, the boat will not complete a full circle. While the boat is coasting, it can cause injury to anyone in the boat's path as seriously as the boat would when under power.

We strongly recommend that other occupants be instructed on proper starting and operating procedures should they be required to operate the engine in an emergency (e.g. if the operator is accidentally ejected).

⚠ WARNING

If the operator falls out of the boat, stop the engine immediately to reduce the possibility of serious injury or death from being struck by the boat. Always properly connect the operator to the stop switch using a lanyard.

⚠ WARNING

Avoid serious injury or death from deceleration forces resulting from accidental or unintended stop switch activation. The boat operator should never leave the operator's station without first disconnecting the stop switch lanyard from the operator.

Accidental or unintended activation of the switch during normal operation is also a possibility. This could cause any, or all, of the following potentially hazardous situations:

- Occupants could be thrown forward due to unexpected loss of forward motion - a particular concern for passengers in the front of the boat who could be ejected over the bow and possibly struck by the gearcase or propeller.
- Loss of power and directional control in heavy seas, strong current or high winds.
- Loss of control when docking.

Protecting People in the Water

WHILE YOU ARE CRUISING

It is very difficult for a person standing or floating in the water to take quick action to avoid a boat heading in his/her direction, even at slow speed.

Always slow down and exercise extreme caution any time you are boating in an area where there might be people in the water.

Whenever a boat is moving (coasting) and the outboard gear shift is in neutral position, there is sufficient force by the water on the propeller to cause the propeller to rotate. This neutral propeller rotation can cause serious injury.

WHILE BOAT IS STATIONARY

⚠ WARNING

A spinning propeller, a moving boat, or any solid device attached to the boat can cause serious injury or death to swimmers. Stop the engine immediately whenever anyone in the water is near your boat.

Shift outboard into neutral and shut off the engine before allowing people to swim or be in the water near your boat.

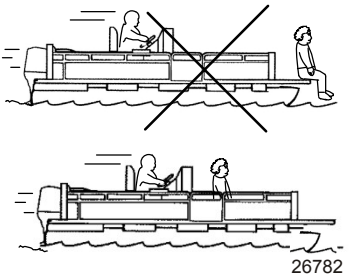
Passenger Safety Message - Pontoon Boats and Deck Boats

Whenever the boat is in motion, observe the location of all passengers. Do not allow any passengers to stand or use seats other than those designated for traveling faster than idle speed. A sudden reduction in boat speed, such as plunging into a large wave or wake, a sudden throttle reduction, or a sharp change of boat direction, could throw them over the front of the boat. Falling over the front of the boat between the two pontoons will position them to be run over by the outboard.

BOATS HAVING AN OPEN FRONT DECK

No one should ever be on the deck in front of the fence while the boat is in motion. Keep all passengers behind the front fence or enclosure.

Persons on the front deck could easily be thrown overboard or persons dangling their feet over the front edge could get their legs caught by a wave and pulled into the water.



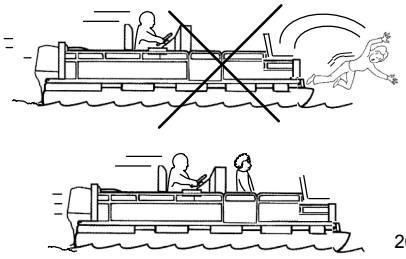
⚠ WARNING

Sitting or standing in an area of the boat not designed for passengers at speeds above idle can cause serious injury or death. Stay back from the front end of deck boats or raised platforms and remain seated while the boat is in motion.

BOATS WITH FRONT MOUNTED, RAISED PEDESTAL FISHING SEATS

Elevated fishing seats are not intended for use when the boat is traveling faster than idle or trolling speed. Sit only in seats designated for traveling at faster speeds.

Any unexpected, sudden reduction in boat speed could result in the elevated passenger falling over the front of the boat.



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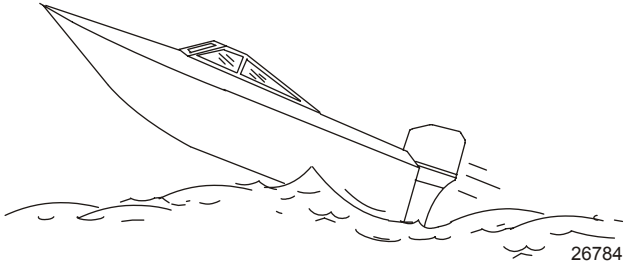
Wave and Wake Jumping

Operating recreational boats over waves and wake is a natural part of boating. However, when this activity is done with sufficient speed to force the boat hull partially or completely out of the water, certain hazards arise, particularly when the boat reenters the water.



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The primary concern is the boat changing direction while in the midst of the jump. In such case, the landing may cause the boat to veer violently in a new direction. Such a sharp change in direction can cause occupants to be thrown out of their seats, or out of the boat.

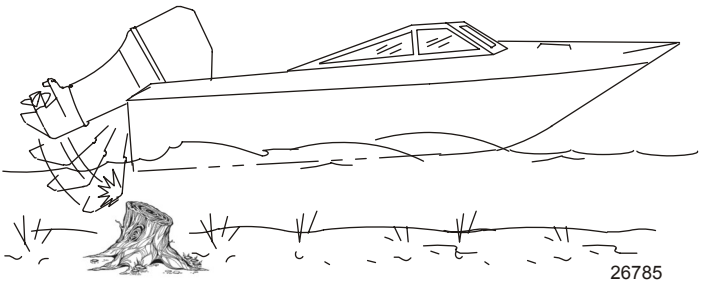
⚠ WARNING

Wave or wake jumping can cause serious injury or death from occupants being thrown within or out of the boat. Avoid wave or wake jumping whenever possible.

There is another less common hazardous result from allowing your boat to launch off a wave or wake. If the bow of your boat pitches down far enough while airborne, upon water contact it may penetrate under the water surface and submarine for an instant. This will bring the boat to a nearly instantaneous stop and can send the occupants flying forward. The boat may also steer sharply to one side.

Impact with Underwater Hazards

Reduce speed and proceed with caution whenever you drive a boat in shallow water areas, or in areas where you suspect underwater obstacles may exist which could be struck by the outboard or the boat bottom. **The most important thing you can do to help reduce injury or impact damage from striking a floating or underwater object is to control the boat speed. Under these conditions, boat speed should be kept to a minimum planing speed of 24 to 40 km/h (15 to 25 MPH).**



Striking a floating or underwater object could result in an infinite number of situations. Some of these situations could result in the following:

- Part of the outboard or the entire outboard could break loose and fly into the boat.

- The boat could move suddenly in a new direction. Such a sharp change in direction can cause occupants to be thrown out of their seats or out of the boat.
- A rapid reduction in speed. This will cause occupants to be thrown forward, or even out of the boat.
- Impact damage to the outboard and/or boat.

Keep in mind, the most important thing you can do to help reduce injury or impact damage during an impact is control the boat speed. Boat speed should be kept to a minimum planing speed when driving in waters known to have underwater obstacles.

After striking a submerged object, stop the engine as soon as possible and inspect it for any broken or loose parts. If damage is present or suspected, the outboard should be taken to an authorized dealer for a thorough inspection and necessary repair.

The boat should also be checked for any hull fractures, transom fractures, or water leaks.

Operating a damaged outboard could cause additional damage to other parts of the outboard, or could affect control of the boat. If continued running is necessary, do so at greatly reduced speeds.

⚠ WARNING

Operating a boat or engine with impact damage can result in product damage, serious injury, or death. If the vessel experiences any form of impact, have an authorized Mercury Marine dealer inspect and repair the vessel or power package.

Safety Instructions for Hand-Tilled Outboards

No person or cargo should occupy the area directly in front of the outboard while the boat is in motion. If an underwater obstacle is struck, the outboard will tilt up and could seriously injure anyone occupying this area.

MODELS WITH CLAMP SCREWS:

Some outboards come with transom bracket clamp screws. The use of clamp bracket screws alone, is insufficient to properly and safely secure the outboard to the transom. Proper installation of the outboard includes bolting the engine to the boat through the transom. Refer to **Installation - Installing Outboard** for more complete installation information.

⚠ WARNING

Failure to correctly fasten the outboard could result in the outboard propelling off the boat transom resulting in property damage, serious injury, or death. Before operation, the outboard must be correctly installed with the required mounting hardware. Do not accelerate above idle speed in water that may contain underwater obstacles if the outboard is not attached to the transom correctly.

If an obstacle is struck at planing speed and the outboard is not securely fastened to the transom, it is possible the outboard could lift off the transom and land in the boat.

Exhaust Emissions

BE ALERT TO CARBON MONOXIDE POISONING

Carbon monoxide is present in the exhaust fumes of all internal combustion engines. This includes the outboards, sterndrives, and inboard engines that propel boats, as well as the generators that power various boat accessories. Carbon monoxide is a deadly gas that is odorless, colorless, and tasteless.

Early symptoms of carbon monoxide poisoning which should not be confused with seasickness or intoxication, include headache, dizziness, drowsiness, and nausea.

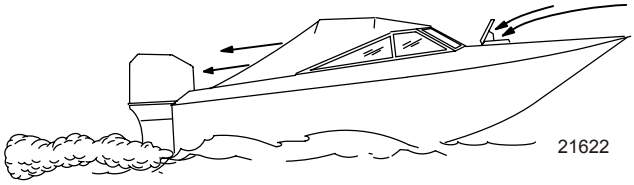
⚠ WARNING

Carbon monoxide poisoning can lead to unconsciousness, brain damage, or death. Keep the boat well ventilated while at rest or underway and avoid prolonged exposure to carbon monoxide.

GENERAL INFORMATION

GOOD VENTILATION

Ventilate passenger area, open side curtains or forward hatches to remove fumes.



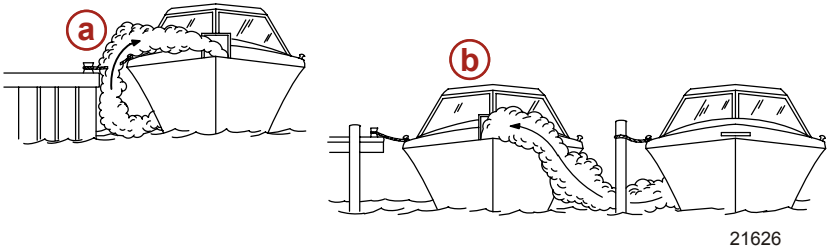
Example of desired air flow through the boat

POOR VENTILATION

Under certain running and/or wind conditions, permanently enclosed or canvas enclosed cabins or cockpits with insufficient ventilation may draw in carbon monoxide. Install one or more carbon monoxide detectors in your boat.

Although the occurrence is rare, on a very calm day, swimmers and passengers in an enclosed area of a stationary boat that contains or is near a running engine may be exposed to a hazardous level of carbon monoxide.

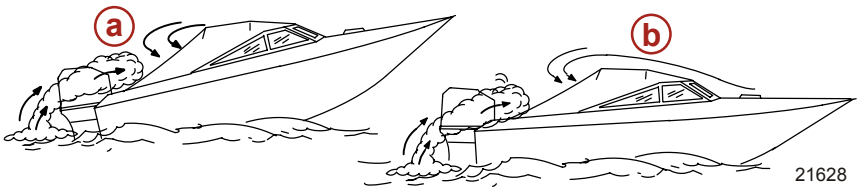
WHILE BOAT IS STATIONARY



a - Running the engine when the boat is moored in a confined space

b - Mooring close to another boat that has its engine running

WHILE BOAT IS MOVING



a - Running the boat with the trim angle of the bow too high

b - Running the boat with no forward hatches open

Selecting Accessories for Your Outboard

Genuine Mercury Precision or Quicksilver Accessories have been specifically designed and tested for your outboard. These accessories are available from Mercury Marine dealers.

IMPORTANT: Check with your dealer before installing accessories. The misuse of approved accessories or the use of nonapproved accessories can damage the product.

Some accessories not manufactured or sold by Mercury Marine are not designed to be safely used with your outboard or outboard operating system. Acquire and read the installation, operation, and maintenance manuals for all your selected accessories.

Safe Boating Suggestions

In order to safely enjoy the waterways, familiarize yourself with local and other governmental boating regulations and restrictions, and consider the following suggestions.

Use flotation devices. Have an approved personal flotation device of suitable size for each person aboard (it is the law) and have it readily accessible.

Do not overload your boat. Most boats are rated and certified for maximum load (weight) capacities (refer to your boat capacity plate). If in doubt, contact your dealer or the boat's manufacturer.

Perform safety checks and required maintenance. Follow a regular schedule and ensure that all repairs are properly made.

GENERAL INFORMATION

Know and obey all nautical rules and laws of the waterways. Boat operators should complete a boating safety course. Courses are offered in the U.S.A. by 1) the U.S. Coast Guard Auxiliary, 2) the Power Squadron, 3) the Red Cross, and 4) your state boating law enforcement agency. Inquiries may be made to the Boating Hotline, 1-800-368-5647 or the Boat U.S. Foundation information number 1-800-336-BOAT.

Make sure everyone in the boat is properly seated. Do not allow anyone to sit or ride on any part of the boat that was not intended for such use. This includes the back of seats, gunwales, transom, bow, decks, raised fishing seats, any rotating fishing seat; or anywhere that an unexpected acceleration, sudden stopping, unexpected loss of boat control, or sudden boat movement could cause a person to be thrown overboard or into the boat.

Never be under the influence of alcohol or drugs while boating (it is the law). Alcohol or drug use impairs your judgment and greatly reduces your ability to react quickly.

Prepare other boat operators. Instruct at least one other person on board in the basics of starting and operating the outboard, and boat handling, in case the driver becomes disabled or falls overboard.

Passenger boarding. Stop the engine whenever passengers are boarding, unloading, or are near the back (stern) of the boat. Just shifting the outboard into neutral is not sufficient.

Be alert. The operator of the boat is responsible by law to maintain a proper lookout by sight and hearing. The operator must have an unobstructed view particularly to the front. No passengers, load, or fishing seats should block the operator's view when operating the boat above idle speed.

Never drive your boat directly behind a water-skier in case the skier falls. As an example, your boat traveling at 40 km/h (25 MPH) will overtake a fallen skier 61 m (200 ft) in front of you in 5 seconds.

Watch fallen skiers. When using your boat for waterskiing or similar activities, always keep a fallen or down skier on the operator's side of the boat while returning to assist the skier. The operator should always have the down skier in sight and never back up to the skier or anyone in the water.

Report accidents. Boat operators are required by law to file a Boating Accident Report with their state boating law enforcement agency when their boat is involved in certain boating accidents. A boating accident must be reported if 1) there is loss of life or probable loss of life, 2) there is personal injury requiring medical treatment beyond first aid, 3) there is damage to boats or other property where the damage value exceeds $500.00, or 4) there is complete loss of the boat. Seek further assistance from local law enforcement.

Recording Serial Number

It is important to record the serial number and other important information for future reference.

Please record the serial number of the engine as indicated (on the lower engine cover and the cylinder block) in the space below. This number will come in handy in the event of theft and it can help you to quickly identify the product type.

Serial number:
Model year:
Model designation:
Year manufactured:
Certified Europe Insignia (as applicable):

NOTE:

GENERAL INFORMATION

NOTE:

Specifications

MODEL	9.9 MH	9.9 EH
Overall lengh	869 mm (34.2 in.)	
Overall width	345 mm (13.6 in.)	
Overall height	S=1067 mm (42.0 in.), L=1194 mm (47.0 in.), UL=1321 mm (52.0 in.)	
Transom height	S=435 mm 17.1 in.), L=562 mm (22.1 in.), UL=689 mm (52.0 in.)	
Weight	9.9 MH=41.0 kg (90.3 lb), 42.0 kg (92.6 lb), 43.0 kg (94.8 lb) 9.9 EH=44.0 kg (97.0 lb), 45.0 kg (99.2 lb), 46.0 kg (101.4 lb)	
Output	7.3 kW	
Max operating range	4500–5300 rpm	
Number of cylinders	2	
Displacement	247 mL	
Bore x stroke	55 x 52 mm (2.1 x 2.0 in.)	
Exhaust system	Through hub exhaust	
Lubrication system	Engine oil mixed gasoline	
Cooling system	Thermostat controlled	
Starting system	Manual	Electric w/manual backup
Ignition	Flywheel magneto CDI	
Spark plugs	NGK B7HS-10/BR7HS-10 or CHAMPION L82C/RL82C (gap 1.0 mm/0.039 in.)	
Trim system	Manual, 6 positions	
Engine oil mixing ratio	Mercury/Quicksilver 2-stroke engine oil 1: Unleaded gasoline 50	
Gear oil	Mercury/Quicksilver gear oil API GL5, SAE #80–90, approximately 370 mL	
Fuel tank capacity	25 L	
Gear reduction ratio	13:24	

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GENERAL INFORMATION

MODEL	15 MH	15 E	18 M
Overrall lengh	869 mm (34.2 in.)	565 mm (22.2 in.)	869 mm (34.2 in.)
Overall width	345 mm (13.6 in.)	290 mm (11.4 in.)	345 mm (13.6 in.)
Overall height	S=1067 mm (42.0 in.), L=1194 mm (47.0 in.), UL=1321 mm (52.0 in.)		
Transom height	S=435 mm 17.1 in.), L=562 mm (22.1 in.), UL=689 mm (52.0 in.)		
Weight	15 MH, 18 M=41.0 kg (90.3 lb), 42.0 kg (92.6 lb), 43.0 kg (94.8 lb) 15 E=44.0 kg (97.0 lb), 45.0 kg (99.2 lb), 46.0 kg (101.4 lb)		
Output	11.0 kW		13.2 kW
Max operating range	5200–5800 rpm		
Number of cylinders	2		
Displacement	247 mL		294 mL
Bore x stroke	55 x 52 mm (2.1 x 2.0 in.)		60 x 52 mm (2.3 x 2.0 in.)
Exhaust system	Through hub exhaust		
Lubrication system	Engine oil mixed gasoline		
Cooling system	Thermostat controlled		
Starting system	Manual	Electric w/ manual back up	Manual
Ignition	Flywheel magneto CDI		
Spark plugs	NGK B7HS-10/BR7HS-10 or CHAMPION L82C/RL82C (gap 1.0 mm/0.039 in.)		
Trim system	Manual, 6 positions		
Engine oil mixing ratio	Mercury/Quicksilver 2-stroke engine oil 1: Unleaded gasoline 50		
Gear oil	Mercury/Quicksilver gear oil API GL5, SAE #80–90, approximately 370 mL		
Fuel tank capacity	25 L		
Gear reduction ratio	13:24		

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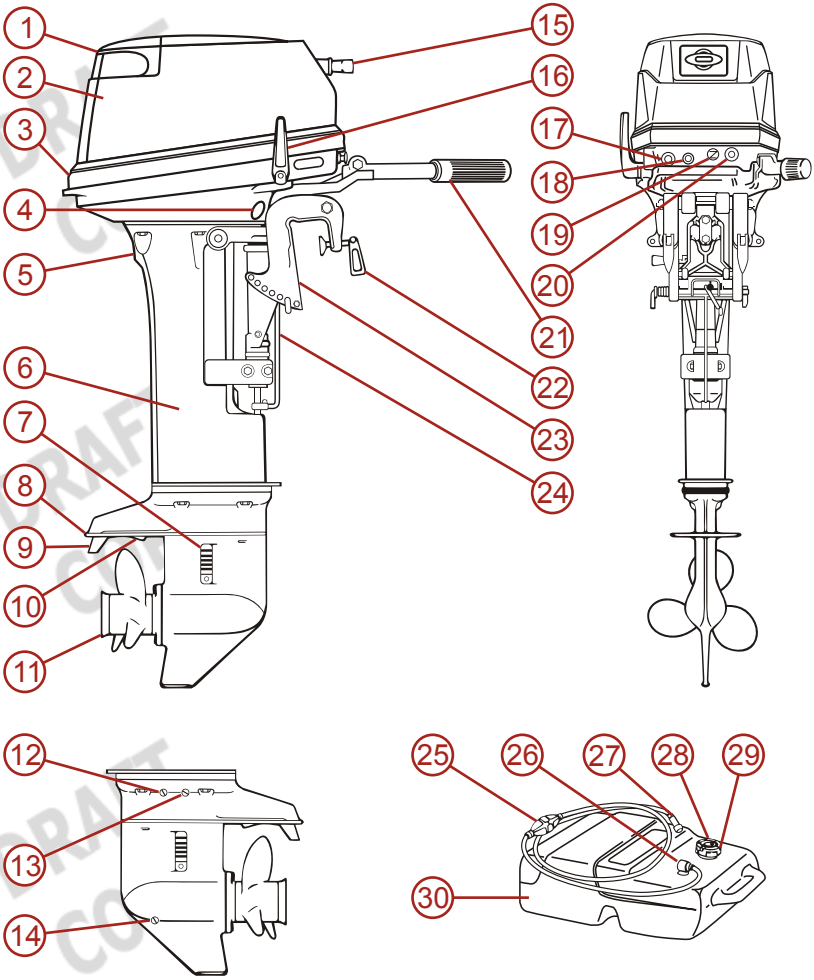
Component Identification



MH Models

GENERAL INFORMATION

1 - Tilt handle
2 - Top cowl
3 - Bottom cowl
4 - Reverse lock lever
5 - Cooling water check port
6 - Drive shaft housing
7 - Water strainer
8 - Anti-ventilation plate
9 - Anode/trim tab
10 - Sub water intake
11 - Propeller
12 - Oil plug (upper)
13 - Water plug
14 - Oil plug (lower)
15 - Starter handle
16 - Shift lever
17 - Stop switch
18 - Choke knob
19 - Connetor B
20 - Throttle grip
21 - Clamp screws
22 - Transom brackets
23 - Thrust rod
24 - Primer bulb
25 - Fuel pick up elbow
26 - Fuel connector
27 - Fuel tank cap
28 - Air vent screw
29 - Fuel tank

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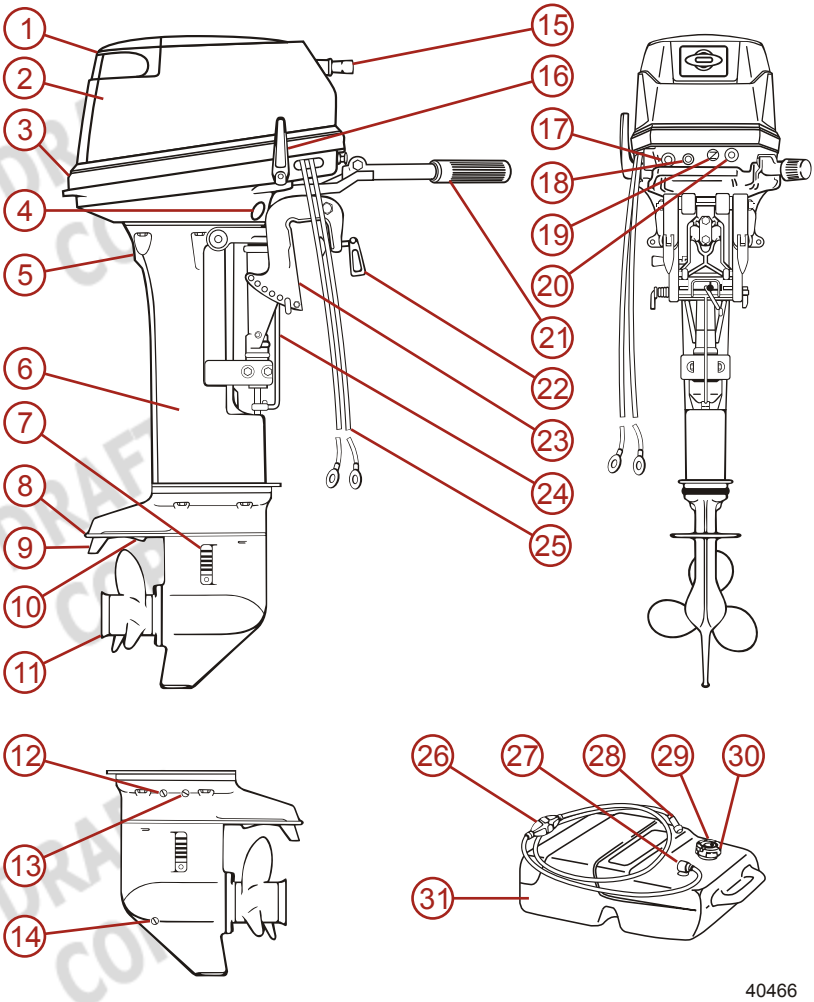
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EH Models

GENERAL INFORMATION

1 - Tilt handle
2 - Top cowl
3 - Bottome cowl
4 - Reverse lock lever
5 - Cooling water check port
6 - Drive shaft housing
7 - Water strainer
8 - Anti-ventilation plate
9 - Anode/trim tab
10 - Sub water intake
11 - Propeller
12 - Oil plug (upper)
13 - Oil plug (lower)
14 - Water plug
15 - Starter handle
16 - Shift lever
17 - Stop switch
18 - Starter switch button
19 - Choke knob
20 - Connectro B
21 - Throttle grip
22 - Clamp screws
23 - Transom brackets
24 - Thrust rod
25 - Primer bulb
26 - Fuel pick up elbow
27 - Fuel connector
28 - Fuel tank cap
29 - Air vent screw
30 - Fuel tank

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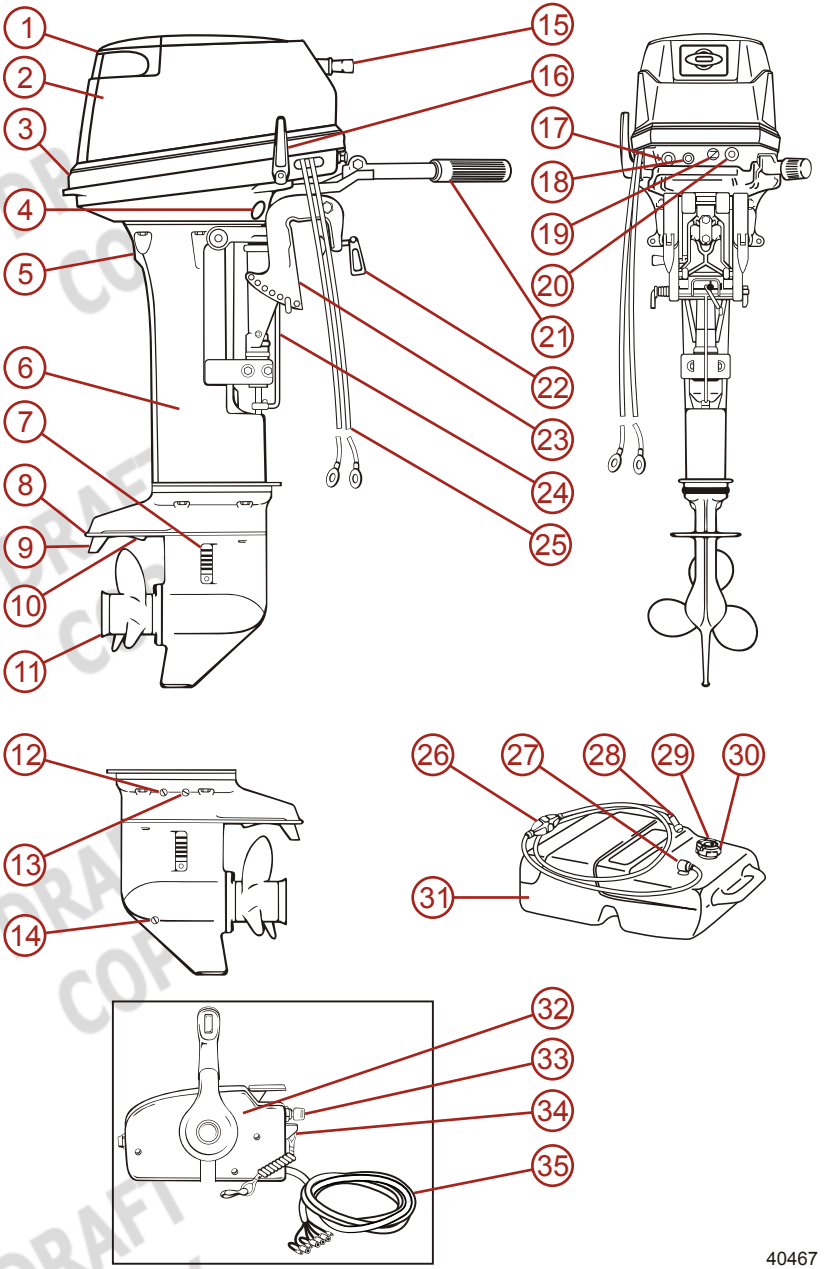
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E Models

GENERAL INFORMATION

1 - Tilt handle
2 - Top cowl
3 - Bottom cowl
4 - Reverse lock lever
5 - Cooling water check port
6 - Drive shaft housing
7 - Water intake
8 - Anti-ventilation
9 - Anode/trim tab
10 - Sub water intake
11 - Propeller
12 - Oil plug (upper)
13 - Water plug
14 - Oil plug (lower)
15 - Starter handle
16 - Shift lever
17 - Stop switch (optional)
18 - Choke knob
19 - Connector B
20 - Clamp screws
21 - transom brackets
22 - Thrust rod
23 - Battery cord
24 - Primer bulb
25 - Fuel pick up elbow
26 - Fuel connector
27 - Fuel tank cap
28 - Air vent screw
29 - Fuel tank
30 - Remote control box
31 - Main switch
32 - Stop switch
33 - Cord asembly

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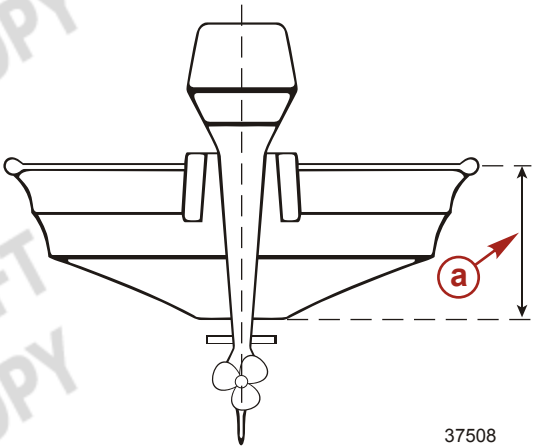
Installing Outboard

NOTE: *If outboard is a remote control electric start model, follow instructions in the outboard installation manual (provided with the outboard) for installing remote steering shift and throttle cables and remote wiring harness.*

INSTALLING OUTBOARD ON TRANSOM

IMPORTANT: Most boats are rated and certified in terms of their maximum horsepower, and this is shown on the boat's certification plate, Do not equip your boat with an outboard that exceeds this limit. If in doubt, contact your dealer. Do not operate the engine unit until it has been securely mounted on the boat in accordance with the instructions below.

1. **Single engine:** Position the outboard motor at the center of the transom. Mount it using a cushioning pad or plate.



a - Boat transom

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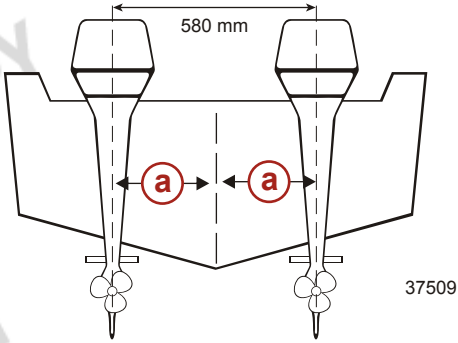
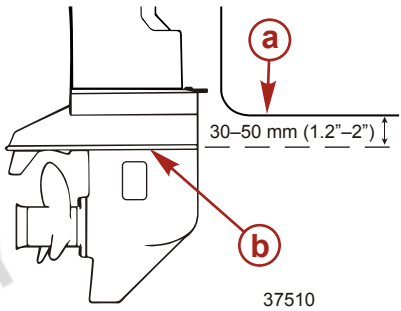
2. **Twin engine:** Position the outboard engines approximately 580 mm (22.8 in.) apart, measured from the center line of each engine, and equal distance (a) from the center of the transom.



3. **Transom matching:** Be sure that the anti-ventilation plate of the outboard is below the water surface when running with the throttle wide open. If the above condition cannot be met due to the shape of the bottom of the boat, please consult the dealer.

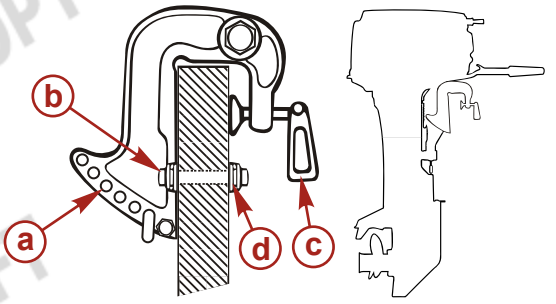
IMPORTANT: If the anti-ventilation plate is at a level higher than the bottom of the boat, overheating may occur as a lack of cooling water flow in the cooling systems.

4. Clearance between the anti-ventilation plate of the motor and the bottom of the boat must be 30–50 mm (1.2–2 in.). If the height difference exceeds 50 mm (2 in.), engine power performance is likely to be reduced as a result of increased water resistance to the gearcase assembly.



a - Bottom of hull **b -** Anti-ventilation plate

5. Fasten outboard by drilling two 7.9 mm (5/16 in.) holes through the transom using transom clamp holes as a template. Fasten with two bolts, flat washers and locknuts. The use of clamp handles alone is insufficient to properly and safely secure the outboard to the transom. Use a marine waterproofing sealer in holes and around bolts to make the installation water tight.



a - Tilt position holes
b - Bolt
c - Clamp screw handle
d - Nut and washer

⚠ WARNING

Failure to correctly fasten the outboard could result in the outboard propelling off the boat transom resulting in property damage, serious injury, or death. Before operation, the outboard must be correctly installed with the required mounting hardware. Do not accelerate above idle speed in water that may contain underwater obstacles if the outboard is not attached to the transom correctly.

Installing the Remote Control Devices

It is recommended to consult with your dealer for installation and adjustment of the remote control device.

1. **Installation of the remote control cables (Box side):** Follow the instruction manual provided with the remote control box.

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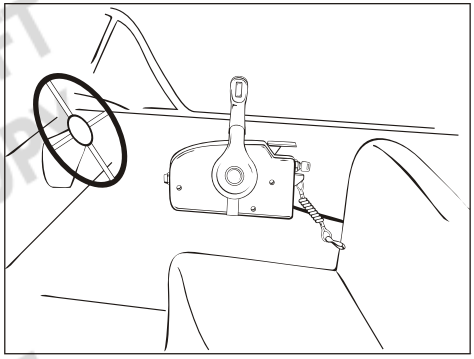
2. **Installation of the remote control box:** Follow the instruction manual provided with the remote control box.



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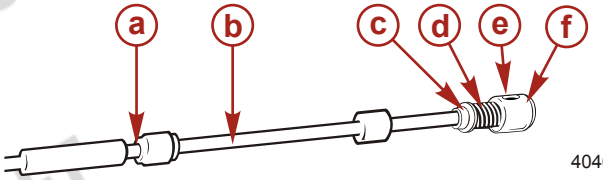
3. Installing of the remote control cable (engine side) and the cord assembly (wiring harness).

Fitting of holdercap and sleeve B guide

- **Throttle side:** Attach the holder cap to the end of the cable and secure it with the nut.



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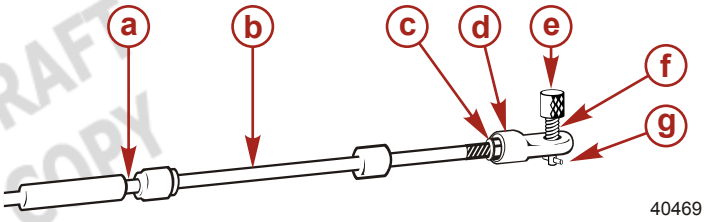
a - Cable outer groove
b - Throttle cable
c - Nut
d - Spring
e - Holder cap
f - Ball holder

- **Shift side:** Attach the sleeve B guide to the end of the cable and secure it with the nut.



a - Cable outer groove
b - Shift cable
c - Nut
d - Sleeve B guide
e - Lock pin
f - Spring
g - Spring pin

Fitting of remote control cable to the engine

- **Throttle side:** Set the throttle cable to the cable clip and connect the holder cap to the ball joint of advancer arm.

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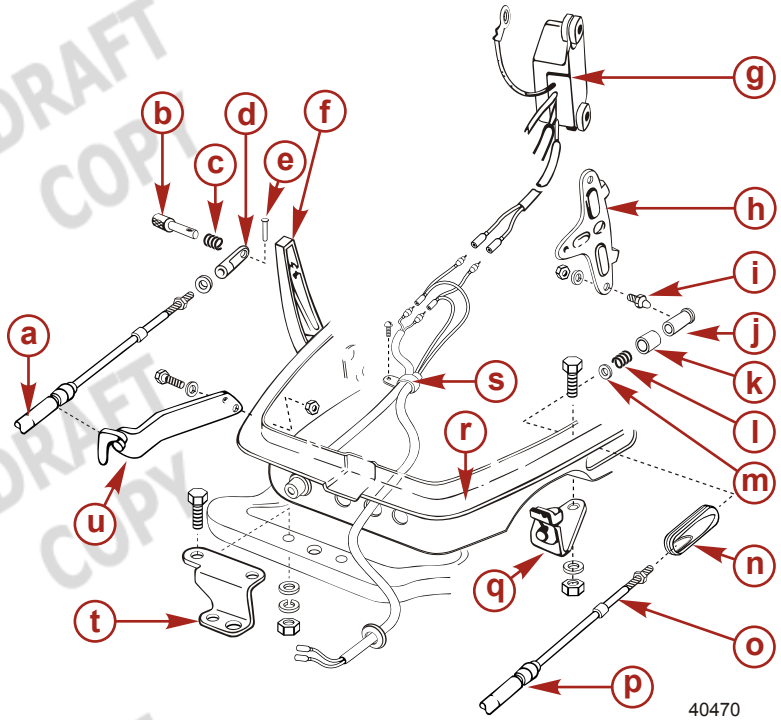
INSTALLATION

- **Shift side:** Set the shift cable to the cable clip and insert the lock pin at the shift lever fitting hole and turn it 90° to lock it.



a - Cable of the shift side
b - Cotter pin
c - Spring
d - Sleeve B guide
e - Spring pin
f - Shift lever
g - CD unit
h - Advancer arm
i - Ball joint
j - Ball holder
k - Holder cap
l - Spring
m - Washer
n - Grommet B is installed on the lower cowl
o - Cable of the throttle side
p - Cable outer groove
q - Cable clip
r - Lower cowl
s - Clamp
t - Steering hook plate
u - Shift cable clip

NOTE: *Put the control lever on the Neutral (N) position and the Neutral warm-up lever in the fully closed position.*

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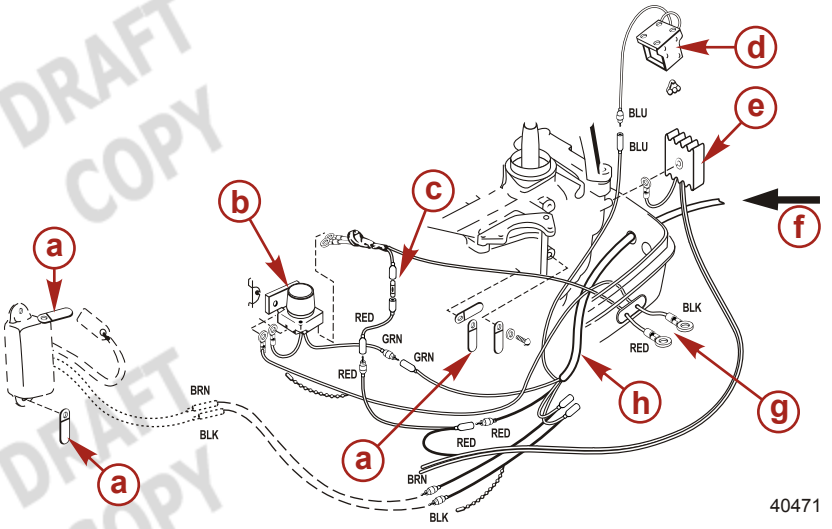
INSTALLATION

NOTE: *Confirm whether the engine side shift is in gear when shifting the control lever of the remote control box to its first position in Forward (F) or Reverse (R) , about 32° and whether the throttle of the carburetor is fully open when shifting the lever further. Confirm whether the carburetor's throttle is fully closed when the control lever is shifted to the Neutral (N) position. If it is not, adjust the position of the ball holder.*

Connecting Electrical Harnesses

- Pass the cable assembly from the remote control box through the hole in the lower cowl and connect the electric terminals. Secure the cable assembly with the clamp according to the drawing below.



a - Clamp
b - Starter solenoid
c - Fuse wire
d - Choke solenoid
e - Rectifire
f - From the remote control box
g - Battery cable
h - Cable assembly

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Battery Installation

MOUNTING BATTERY

Follow the battery manufacturer's instructions carefully. Mount battery securely to the hull in a place free from splashing water.

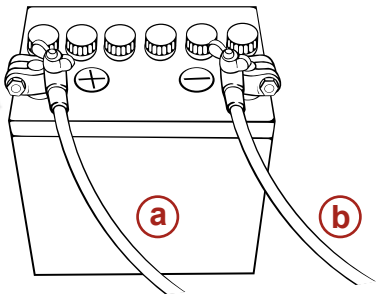
NOTE: *Electric starting outboards must have the battery cables connected to a battery whenever the engine is running, even if started manually, as damage to the charging system could result.*

BATTERY CONNECTIONS

Connect a red cable to the positive (+) terminal first and a black cable to the negative (–) terminal of the battery. Put a red cap on the positive terminal. When disconnecting battery cables, be sure to disconnect the black cable first, and then the red cable.

Required battery rating: 12 V battery with a recommended capacity of 40AH or more.

- Battery cables must be long enough to allow free steering.
- Battery cables must be arranged and protected from damage during steering.
- With poor cable connections, the starter will fail to start.
- Battery cable terminals should be clean, tight, and correctly installed. Positive to positive and negative to negative.
- Battery must be fully charged before running the motor.



a - Red cable **b -** Black cable

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INSTALLATION

IMPORTANT: Please follow the instructions below:

- Hydrogen gas is generated when charging a battery. Keep the battery in a well-ventilated area during charging. Remove the battery from the boat; this will protect your hull and interior from damage. Electric sparks, cigarette smoking, and other sources of fire must be avoided in the charging area to prevent explosion of the battery.
- The battery fluid (electrolyte) contains sulfuric acid. If electrolyte is spilled on the skin or clothes, wash with plenty of water and consult a medical doctor. Always use safety glasses and rubber gloves when handling the battery.

Propeller Selection

The propeller supplied with your outboard provides the best overall performance under average operating conditions.

Propeller must be selected so that the engine rpm when cruising with a wide-open throttle is within the recommended range.

Model	Wide-open throttle rpm range
9.9	4500-5300 rpm
15/18	5200-5800 rpm

If changing conditions cause the rpm to drop below the recommended range, such as warmer, more humid weather, operation at higher elevations, increased boat load, or a dirty boat bottom/gercase, a propeller change or cleaning may be required to maintain performance and ensure the outboard's durability.

Check full-throttle rpm, using an accurate tachometer, with the engine trimmed out to a balanced-steering condition (steering effort equal in both directions) without causing the propeller to break loose.

PROPELLER TABLE

A propeller must be selected so that the engine rpm measured at wide open throttle while cruising is within the recommended range. Refer to **Accessories - Propeller Table** of this manual.

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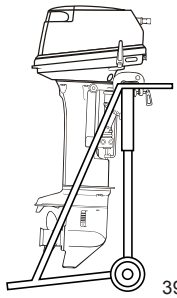
TRANSPORTING

Removing the Motor

1. Stop the engine.
2. Disconnect the fuel connector, the remote control cable, the battery cables, bracket fixing bolts and nuts etc., from the motor.
3. Remove the motor from the hull and completely drain the water from the outboard. Be sure to keep the engine higher than the propeller whenever you carry the motor.

Carrying the Motor

Be sure to keep the engine vertical posture whenever you carry the motor.



NOTE: If you carry the motor horizontal posture, keep the power head higher than the propeller.

IMPORTANT: Beware of explosion danger. Spilled and vapored gasoline may easily catch fire and explode. Be sure to fully discharge gasoline from the carburetors when transporting the engine. Wipe off spilled gasoline with a rag.

Storing the Motor

Keep the motor verical posture when you store it.

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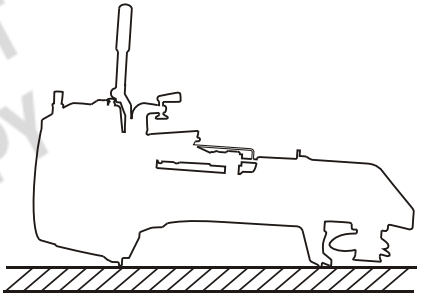
NOTE: *If you store the motor horizontal posture, lay the motor down on the ground with the handles facing upward.*



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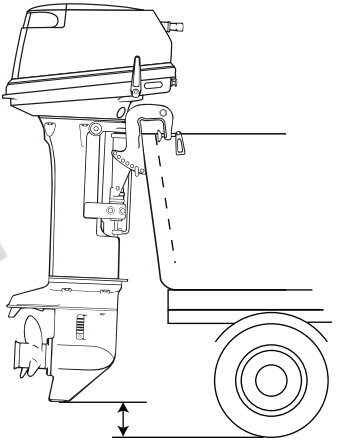
Trailering Boat/Outboard

The boat should be trailered with the outboard tilted down in a vertical (normal running),fully down position.

NOTE: *Trailering in the tilted position may cause damage to the motor, boat, etc. If trailering with engine fully down is not available (the gearcase skeg is too close to the road in a vertical position), attache the motor securely using a device (like a transom saver bar) in the tilted position.*



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Shift the outboard to forward gear. This prevents the propeller from spinning freely.

If additional ground clearance is required, the outboard should be tilted up using an accessory outboard support device. Refer to your local dealer for recommendations. Additional clearance may be required for railroad crossings, driveways, and trailer bouncing.

IMPORTANT: The tilt lock and shallow water drive feature (tiller handle models) on the outboard are not intended to support the outboard in the tilted position when trailering.

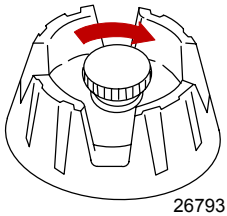
Transporting Portable Fuel Tanks

⚠ WARNING

Avoid serious injury or death from a gasoline fire or explosion. Follow the transporting instructions supplied with the portable fuel tank. Transport the fuel tank in a well ventilated area away from open flame or sparks.

MANUAL VENTING TYPE FUEL TANK

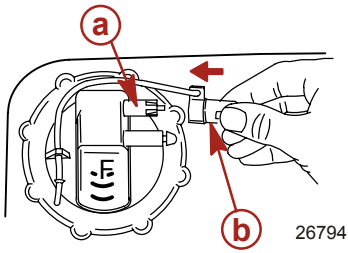
Close fuel tank air vent when transporting tank. This will prevent escape of fuel or vapors from tank.



AUTO-VENTING TYPE FUEL TANK

1. Disconnect the remote fuel line from tank. This will close the air vent and prevent escape of fuel or vapors from tank.

2. Install tether cap over the fuel line connector stem. This will protect the connector stem from being accidently pushed-in, thus, allowing fuel or vapor to escape.



a - Connector stem **b -** Tether cap

FUEL AND OIL

Fuel Recommendations

IMPORTANT: Use of improper gasoline can damage your engine. Engine damage resulting from the use of improper gasoline is considered misuse of the engine, and damage caused thereby will not be covered under the limited warranty.

FUEL RATINGS

Mercury Marine engines will operate satisfactorily when using a major brand of unleaded gasoline meeting the following specifications:

USA and Canada - having a posted pump Octane Rating of 87 (R +M)/2 minimum. Premium gasoline (92 [R+M]/2 Octane) is also acceptable. Do not use leaded gasoline.

Outside USA and Canada - having a posted pump Octane Rating of 90 RON minimum. Premium gasoline (98 RON) is also acceptable. If unleaded gasoline is not available, use a major brand of leaded gasoline.

USING REFORMULATED (OXYGENATED) GASOLINES (USA ONLY)

This type of gasoline is required in certain areas of the USA. The 2 types of oxygenates used in these fuels are alcohol (ethanol) or ether (MTBE or ETBE). If ethanol is the oxygenate that is used in the gasoline in your area, refer to **Gasolines Containing Alcohol**.

These reformulated gasolines are acceptable for use in your Mercury Marine engine.

GASOLINES CONTAINING ALCOHOL

If the gasoline in your area contains either methanol (methyl alcohol) or ethanol (ethyl alcohol), you should be aware of certain adverse effects that can occur. These adverse effects are more severe with methanol. Increasing the percentage of alcohol in the fuel can also worsen these adverse effects.

Some of these adverse effects are caused because the alcohol in the gasoline can absorb moisture from the air, resulting in a separation of the water/alcohol from the gasoline in the fuel tank.

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FUEL AND OIL

The fuel system components on your Mercury Marine engine will withstand up to 10% alcohol content in the gasoline. We do not know what percentage your boat's fuel system will withstand. Contact your boat manufacturer for specific recommendations on the boat's fuel system components (fuel tanks, fuel lines, and fittings).

Be aware that gasolines containing alcohol may cause increased:

- Corrosion of metal parts.
- Deterioration of rubber or plastic parts.
- Fuel permeation through rubber fuel lines.
- Starting, idling, and other engine performance problems.
- Do not use gasoline that contains more than 10% ethanol or more than 5% methanol.
- Damages resulting from the use of gasolines that contain alcohol, acetone or benzene are not covered under the limited warranty.

⚠ WARNING

Fuel leakage is a fire or explosion hazard, which can cause serious injury or death. Periodically inspect all fuel system components for leaks, softening, hardening, swelling, or corrosion, particularly after storage. Any sign of leakage or deterioration requires replacement before further engine operation.

Because of possible adverse effects of alcohol in gasoline, it is recommended that only alcohol-free gasoline be used where possible. If only fuel containing alcohol is available, or if the presence of alcohol is unknown, increased inspection frequency for leaks and abnormalities is required.

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FUEL AND OIL

IMPORTANT: When operating a Mercury Marine engine on gasoline containing alcohol, storage of gasoline in the fuel tank for long periods should be avoided. Long periods of storage, common to boats, create unique problems. In cars, alcohol-blend fuels normally are consumed before they can absorb enough moisture to cause trouble, but boats often sit idle long enough for phase separation to take place. In addition, internal corrosion may take place during storage if alcohol has washed protective oil films from internal components.

Oil Recommendation

Recommended Oil	**Mercury or Quicksilver Premium 2-Cycle TC-W3 Outboard Oil**

IMPORTANT: Oil must be NMMA certified TC-W3 2-Cycle oil.

Mercury or Quicksilver Premium TC-W3 2-Cycle oil is recommended for this engine. For added protection and lubrication, Mercury or Quicksilver Premium Plus TC-W3 2-Cycle oil is recommended. If Mercury or Quicksilver outboard oil is not available, substitute another brand of 2-cycle outboard oil that is NMMA Certified TC-W3. Severe engine damage may result from use of an inferior oil.

Mixing Fuel and Oil

Use a 1:25 oil/gasoline mixture in the first tank of fuel.

After the break-in fuel mixture is used up, use a 1:50 oil/gasoline mixture. Refer to the table (following) for mixing ratios.

GASOLINE/OIL MIXING RATIO CHART

GASOLINE/OIL MIXING RATIO CHART			
Oil/ Gas Ratio	3.8 liters (1 gal.) gas	11.5 liters (3 gal.) gas	23 liters (6 gal.) gas
1:25	148 ml (5 fl. oz.) oil	473 ml (16 fl. oz.) oil	946 ml (32 fl. oz.) oil
1:50	89 ml (3 fl. oz.) oil	237 ml (8 fl. oz.) oil	473 ml (16 fl. oz.) oil

MIXING PROCEDURE

Pour the full amount of oil along with approximately one gallon of gasoline into an approved container. Shake the two together until they are thoroughly mixed. Add the remainder of gasoline and shake container to ensure mixing.

ENGINE BREAK-IN

Engine Break-in Fuel Mixture

Use a 1:25 oil/gaoline mixture in the first tank of fuel.

Engine Break-in Procedure

Refer to **Operation - Engine Break-In Procedure** for correct break-in procedure.

Filling Fuel Tank

⚠ WARNING

Avoid serious injury or death from a gasoline fire or explosion. Use caution when filling fuel tanks. Always stop the engine and do not smoke or allow open flames or sparks in the area while filling fuel tanks.

Fill fuel tanks outdoors away from heat, sparks, and open flames.

Always stop engine before refilling tanks.

Do not completely fill the fuel tanks. Leave approximately 10% of the tank volume unfilled. Fuel will expand in volume as its temperature rises and can leak under pressure if the tank is completely filled.

FILLING FUEL TANKS PERMANENTLY INSTALLED

Slowly pour the correct amount of oil along with gasoline as the tank is being filled.

FILLING PORTABLE FUEL TANKS

Remove portable fuel tanks from boat to refill them.

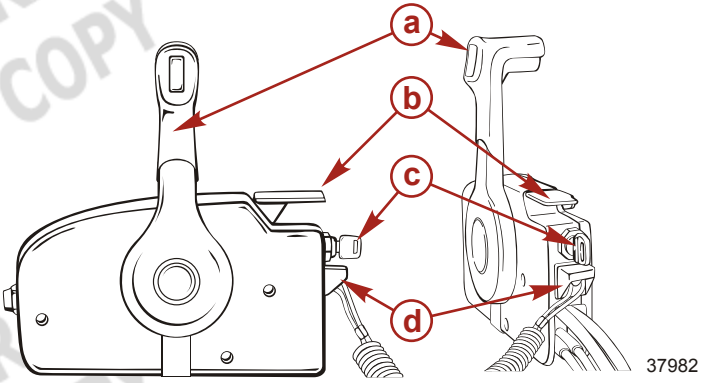
Pour the full amount of oil along with approximately one gallon of gasoline into the fuel tank. Mix thoroughly, then pour the remainder of gasoline into the tank.

PORTABLE FUEL TANK PLACEMENT IN THE BOAT

Place the fuel tank in the boat so the vent is higher than the fuel level under normal boat operating conditions.

Remote Control Features

Your boat may be equipped with the remote control shown. If not, consult your dealer for a description of the functions and operations of the remote control.



a - Remote control handle
b - Throttle only lever
c - Ignition key switch
d - Lanyard stop switch

Tilt Up and Tilt Down

BASIC TILTING OPERATION

The tilt feature allows the operator to tilt the outboard to a higher tilt angle for operation in shallow water, or tilt the outboard to the full up position.

When running the outboard, keep the tilt lever in the release position. This allows the outboard to return to the running position if the outboard should hit an underwater obstacle and be lifted up.

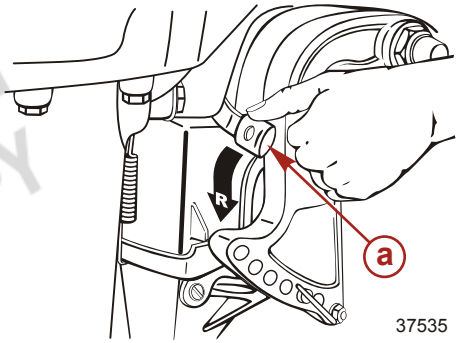
Moving the tilt lever to the tilt position will allow the outboard to lock into the shallow water drive position or the full up position.

IMPORTANT: When tilting up or down, be careful not to place your hand between the swivel bracket and the stern bracket. Be sure to tilt the outboard down slowly.

NOTE: *Stop the engine before tilting up.*

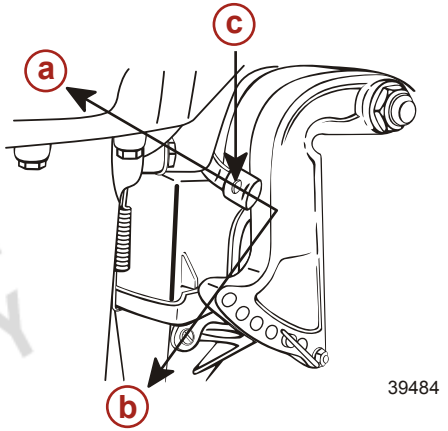
1. Stop the engine.
2. **Tilt up:** Push the reverse lock lever down until it stops. This is the tilt up position.

3. Tilt the engine all the way up until it locked in place.



a - Reverse lock lever

4. **Tilt down:** Pull the reverse lever upward until it stops. This is the tilt down position.
5. Lift up the engine slightly, and then allow gravity to lower it for you.



a - Tilt down position

b - Tilt up position

c - Reverse lock lever

Shallow Water Operation

IMPORTANT: When shallow water operation, be careful not to place your hand between the swivel bracket and the stern bracket. Besure to tilt the outboard down slowly.

NOTE: *Slow down to trolling speed, and shift to the Neutral (N) before shallow water operating.*

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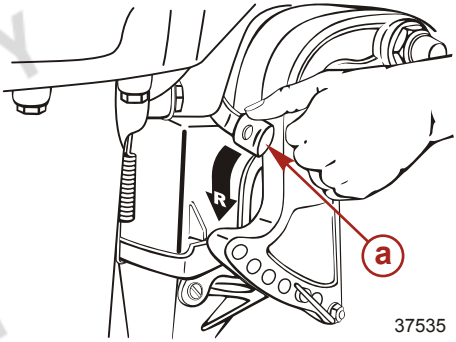
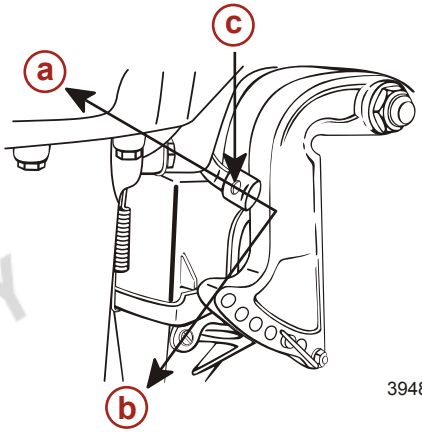
1. Stop the engine.
2. **Tilt up:** Put the reverse lock lever in the tilt up position, and tilt up the engine to put the engine in the shallow water running position.



a - Reverse lock lever

3. **Tilt down:** Pull the reverse lock lever in the tilt down position, slightly lift up the engine, then put it down.



a - Tilt down position

b - Tilt up position

c - Reverse lock lever

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NOTE: *Please follow the instructions below.*

- *Make sure that the water inlet is submerged at all times and that water is continuously running out of the cooling water check port.*
- *Be sure to run the engine slowly when using the shallow water drive. Running at higher speed will result in lack of control and may damage the engine.*
- *Make sure the motor does not strike the bottom, especially when running in REVERSE. If the motor does strike the bottom while in reverse, the impact is transmitted to the transom, which could damage both the motor and the boat.*

Trim Angle Adjustment

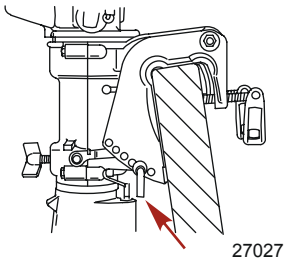
The vertical operating angle of your outboard is adjusted by changing the position of the tilt pin in the adjustment holes provided. Proper adjustment allows the boat to achieve optimum performance, stability, and minimize steering effort.

The following instructions explain how to set the best angle of the boat.

The tilt pin should be adjusted so the outboard is positioned to run perpendicular to the water when the boat is running at full speed. This allows the boat to be driven parallel to the water.

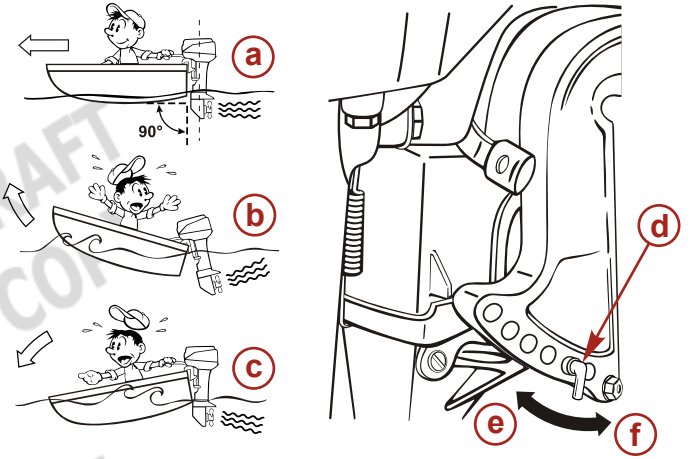
Arrange passengers and load in the boat so the weight is distributed evenly.

The trim angle is adjusted by setting the trim position pin in the correct trim position.



- **Correct trim:** The trim angle is optimum when the boat is parallel to the water surface while running.

- **Trim down:** If the trim angle is excessive, the bow will rise out of the water and the speed will decrease. Furthermore, the bow may sway or the bottom may slam the water while cruising. In this case, decrease the trim angle by setting the trim position pin in a lower position.
- **Trim up:** If the trim angle is too small, the bow will dip into water, the speed will decrease, and water may enter the boat. In this case, the trim angle should be increased by setting the trim position pin in a higher position.



a - Correct trim
b - Trim down
c - Trim up
d - Trim position pin
e - Move pin to raise bow up
f - Move pin to lower bow down

Steering Friction Adjustment

Steering friction can be adjusted according to your preference with the steering co-pilot.

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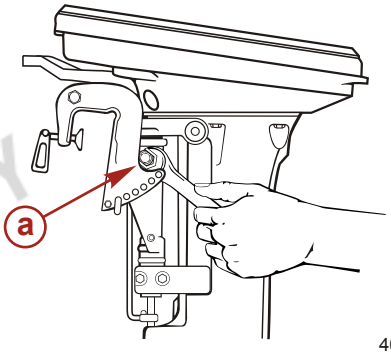
⚠ WARNING

Insufficient friction adjustment can cause serious injury or death due to loss of boat control. When setting the friction adjustment, maintain sufficient steering friction to prevent the outboard from steering into a full turn if the tiller handle or steering wheel is released.

Adjust the steering co-pilot to achieve desired steering friction.

- Turn clockwise for more friction.
- Turn counterclockwise for less friction.



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a - Steering co-pilot

NOTE: *The steering adjust bolt is used to adjust the sliding load of the steering, but not to correct the steering. If excess tightening given to the bolt may cause damage to the swivel bracket .*

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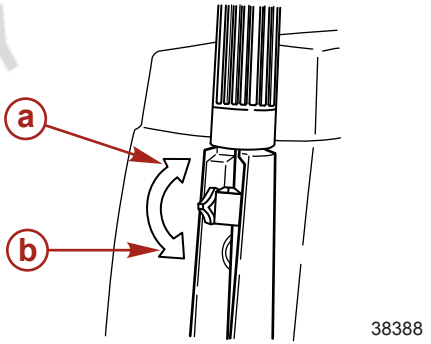
Throttle Grip Turning Friction Adjustment

Turn the friction adjustment screw to set and maintain the throttle at desired speed. Turn screw clockwise to tighten friction and turn screw counterclockwise to loosen friction.



a - Loosen friction **b -** Tighten friction

Trim Tab Adjustment

Propeller steering torque will cause the boat to pull in one direction. This steering torque is a normal results from the outboard not trimmed with the propeller shaft parallel to the water surface. The trim tab can help compensate for this steering torque in many cases and can be adjusted within limits to reduce any unequal steering effort.

- Operate the boat at normal cruising speed with the outboard set at the desired operating angle position. Turn the boat left and right and note the direction the boat turns more easily.
- If adjustment is necessary, loosen the trim tab bolt and make small adjustments at a time.
- After adjustment, securely tighten the trim tab bolt.

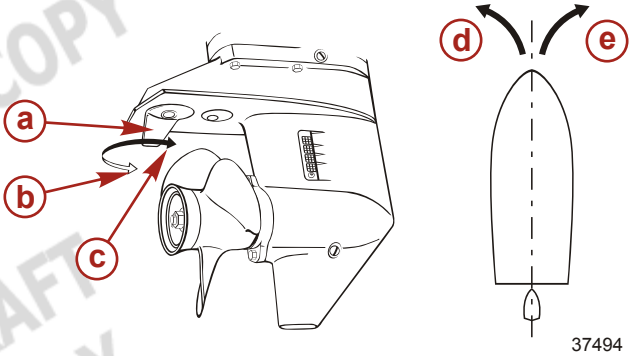
NOTE: *Check for looseness of the bolt and the trim tab at regular intervals. Due to corrosion, the trim tab will wear down over time.*

IMPORTANT: The trim tab also acts as an anode to prevent galvanic corrosion. Do not apply any paint, grease, or other material to the surface of the trim tab.

NOTE: *Trim tab adjustment will have little effect reducing steering torque if the outboard is installed with the anti-ventilation plate approximately 50 mm (2 in.) or more above the boat bottom.*

The trim tab is located under the anti-ventilation plate.

- If the boat steers toward the left, set the trim tab in the direction of B.
- If the boat steers toward the right, set the trim tab in the direction of C.



a - Trim tab
b - Steers toward the left, set the trim tab in the direction of B
c - Steers toward the right, set the trim tab in the direction of C
d - Turning left
e - Turning right

REMOTE CONTROL LEVER FRICTION

(Throttle friction adjustment screw)

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To adjust the load of the remote control lever, turn the throttle friction adjustment screw on the front of the remote control box. Turn clockwise to increase the friction and counterclockwise to decrease it.

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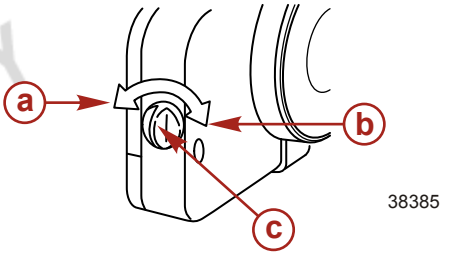

a - Turn counterclockwise to decrease the friction
b - Turn clockwise to increase the friction
c - Throttle friction adjustment screw

OPERATION

Pre-Starting Check List

- Operator knows safe navigation, boating, and operating procedures.
- An approved personal flotation device of suitable size for each person aboard and readily accessible (it is the law).
- A ring type life buoy or buoyant cushion designed to be thrown to a person in the water.
- Know your boats' maximum load capacity. Look at the boat capacity plate.
- Fuel supply OK.
- Arrange passengers and load in the boat so the weight is distributed evenly and everyone is seated in a proper seat.
- Tell someone where you are going and when you expect to return.
- It is illegal to operate a boat while under the influence of alcohol or drugs.
- Know the waters and area you will be boating; tides, currents, sand bars, rocks, and other hazards.
- Make inspection checks listed in **Maintenance - Inspection and Maintenance Schedule.**

Operating in Freezing Temperatures

When using your outboard or having your outboard moored in freezing or near freezing temperatures, keep the outboard tilted down at all times so the gearcase is submerged. This prevents trapped water in gearcase from freezing and causing possible damage to the water pump and other components.

If there is a chance of ice forming on the water, the outboard should be removed and drained completely of water. If ice should form at the water level inside the outboard driveshaft housing, it will block water flow to the engine causing possible damage.

Operating in Saltwater or Polluted Water

We recommend that you flush the internal water passages of your outboard with fresh water after each use in salt or polluted water. This will prevent a buildup of deposits from clogging the water passages. Refer to **Maintenance - Flushing the Cooling System**.

If you keep your boat moored in the water, always tilt the outboard so the gearcase is completely out of water (except in freezing temperatures) when not in use.

Wash the outboard exterior and flush out the exhaust outlet of the propeller and gearcase with fresh water after each use. Each month, spray Mercury Precision or Quicksilver Corrosion Guard on external metal surfaces. Do not spray on corrosion control anodes as this will reduce the effectiveness of the anodes.

Operating at High Elevations

IMPORTANT: To prevent serious damage to the engine caused by a lean fuel mixture, do not operate your outboard (if the jets were changed for high elevation) at a lower elevation unless the jets are changed again to correspond to the new elevation.

Operating your outboard at an elevation higher than 750 m (2500 ft.) above sea level may require a carburetor jet change and/or different pitch propeller. Consult your dealer. This will reduce the normal performance loss experienced as a result of reduced oxygen in the air causing an overly rich fuel mixture.

Operating Outboard as an Auxiliary Engine

If the outboard is used as an auxiliary engine, stop the engine and tilt the outboard out of the water when using the main power source.

IMPORTANT: The outboard must be restrained from bouncing while operating the boat using the main power source. Bouncing can damage the outboard and boat transom.

Pre-Starting Instructions

1. Attach the fuel connector to the engine connector. The arrow-mark on the primer bulb should be facing the engine.

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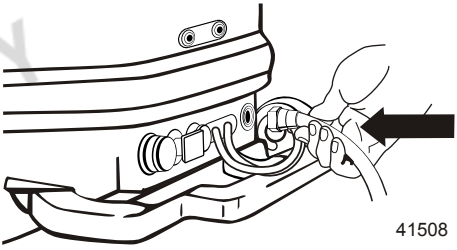
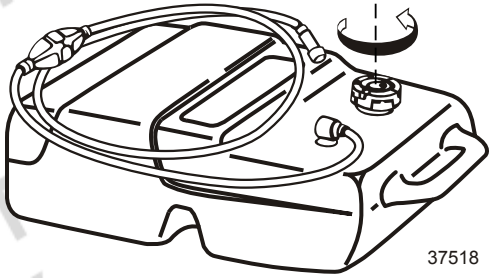


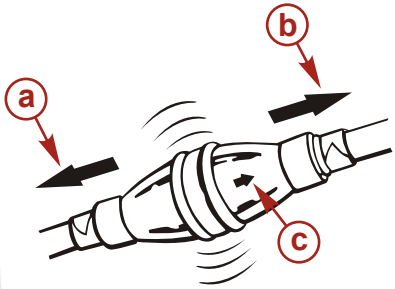
NOTICE

Without sufficient cooling water, the engine, the water pump, and other components will overheat and suffer damage. Provide a sufficient supply of water to the water inlets during operation.

2. Loosen the air vent screw on the tank cap.

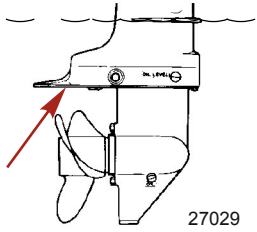


3. Feed fuel to the carburetor by squeezing the primer bulb until it is firm.



a - To fuel tank
b - To engine
c - Fuel flow direction

4. Make sure the cooling water intake is submerged.



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OPERATION

Engine Break-in Procedure

IMPORTANT: Failure to follow the engine break-in procedures can result in poor performance throughout the life of the engine and can cause engine damage. Always follow break-in procedures.

Engine Oil

Use Mercury or Quicksilver engine oil or the other recommended one, that is, TCW-3.

NOTE: Do not mix different brands of oil.
the mixing of different brands, or different kinds even if the same brand, may cause gelling, resulting in blockage of filter screens. This may lead to serious engine damage due to the lack of lubrication.
Mixing ratio (1:50) : Unleaded gasoline 50: Genuine engine oil or recommended engine oil (TCW-3) 1

ENGINE BREAK-IN FUEL MIXTURE

Use a 1:25 oil/gasoline mixture in the first tank of fuel. Use Mercury or Quicksilver engine oil or the recommended oil (TCW-3).

BREAK-IN

Break-in period...10 hours

Vary the throttle setting during the first hour of operation.

During the first hour of operation, avoid remaining at a constant speed for more than two minutes and avoid sustained wide open throttle.

Time	0 min. –	10 min. –	1 hrs. –	2 hrs. –	10 hrs. –
Method of operation	Idling or trolling	Throttle open less than 1/2 of the way(about 3000 rpm)	Throttle open less than 3/4 of the way (about 4000 rpm)	Throttle open 3/4 of the way (about 4000 rpm)	Normal operating
Conditions	Cruising at no more than minimum speed		A full-throttle run is allowed for 1 min. every 10 min.	A full-throttle run is allowed for 2 min. every 10 min.	

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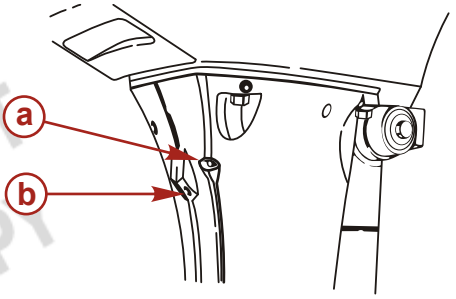
Warming Up the Engine

Warm the engine at low engine speeds for about three minutes. This allows the lubrication oil to circulate to all parts of the engine, Operating the engine without warming it up shortens the engine life. Be sure to check that cooling water is coming out of the water cheek port when warming up the engine.

NOTE: *If the engine is operated continuously without water discharging from the water pump cooling water hole or idle hole, the engine may overheat.*



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a - Water pump cooling water hole

b - Idle hole

Engine speeds: Idling speed after warming up.

Clutch in	Clutch off
800 rpm	950 rpm

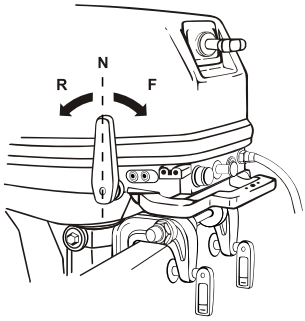
Starting The Engine

Before starting, read the Pre-Starting Check List, Special Operating Instructions, and Engine Break-in Procedure in the Operation Section.

Electric starting outboard models must not be started manually using the starter rope, or run, without having the battery leads connected to a battery. Damage to the charging system could result.

IMPORTANT: If no water is coming out of the water pump indicator hole, stop engine and check cooling water intake for obstruction. No obstruction may indicate a water pump failure or blockage in the cooling system. These conditions will cause the engine to overheat. Have the outboard checked by your dealer. Operating the engine while overheated will cause serious engine damage.

1. **9.9, 15, 18, EH Models:**Place the shift lever in the Neutral (N) position.



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NOTE: *Be sure that the shift is in Neutral (N) when starting the engine. This model is provided with a function that prevents starting in gear protection.*

IMPORTANT: If the motor somehow does start in gear, do not use it. Contact your authorized dealer.

2. Turn the throttle grip until the mark on the grip faces the triangular mark on the steering handle.

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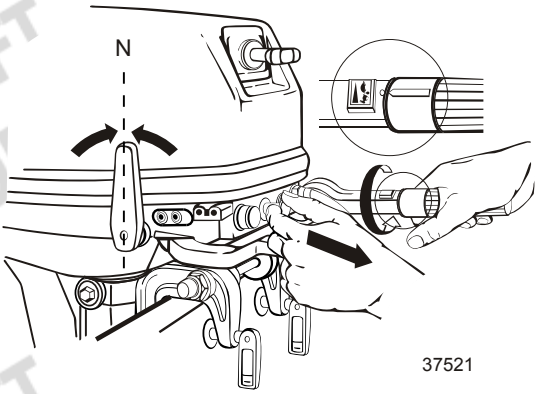
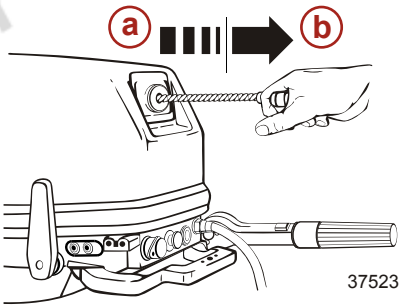
3. Pull out the choke knob all the way. (No choke operation is necessary when the engine is warm.)

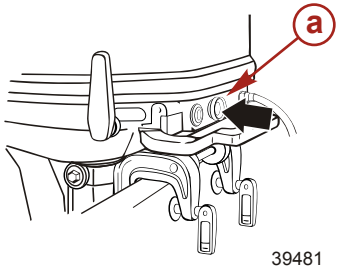


4. **9.9, 15, 18 :** Pull the starter handle slowly until you feel resistance. Then pull it quickly.



a - Pull slowly **b -** Pull quickly

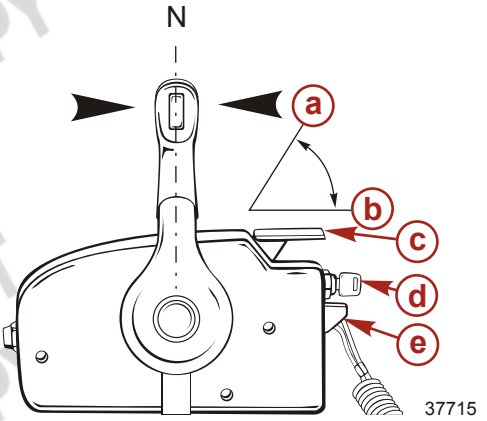
5. **EH Models:**Push the starter switch button.
6. Release pushing the button when the engine has started.



a - Starter switch button

IMPORTANT: If use the choke knob for the engine start, push it back when the engine has started.

7. **E Models:** Insert the main switch key.
8. Set the control lever in the Neutral (N) position. Raise the Neutral (N) warm-up lever.



a - Fully opened
b - Fully closed
c - Neutral warm-up lever
d - Ignition key
e - Stop switch

9. Turn the main switch key to START position. Then, continuously push the key to operate the choke.

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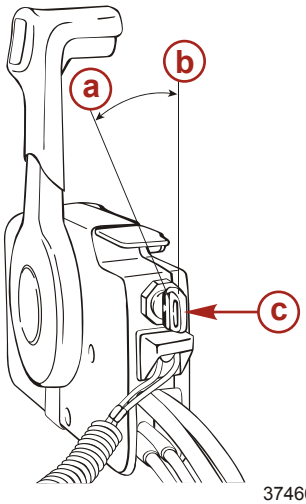
IMPORTANT: Choke operation is not necessary if the engine is warm.



a - Off
b - On
c - Push to operate choke

10. Stop pushing the key when the engine has started. The key returns to the original position automatically.

NOTE: *The neutral warm-up lever can not raise when the control lever shift in Forward (F) or Reverse (R).*

NOTE: E and EH Models:

- *Continuous operation of the starter motor shorter battery and starter motor life. Operate the starter motor for a maximum of 3 seconds. If the engine does not start, wait 5 seconds before engaging the starter motor again.*
- *Do not engage the starter motor after the engine has started.*

Gear Shifting

IMPORTANT: Observe the following:

- **Never shift outboard into gear unless engine speed is at idle. Do not shift outboard into reverse when the engine is not running.**

9.9, 15, 18, EH Models

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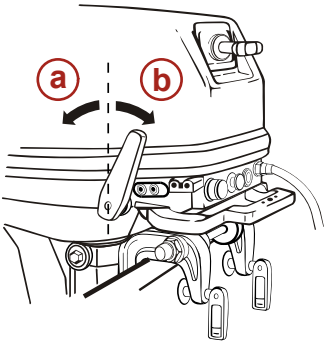

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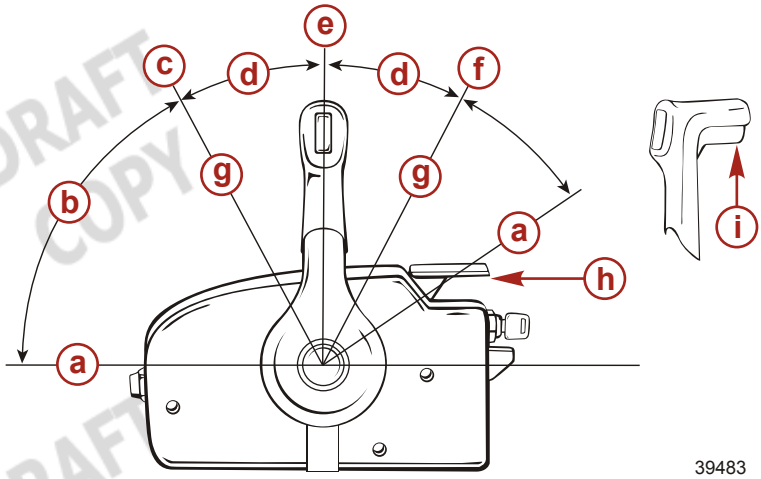
a - Reverse (R) **b -** Forward (F)

1. **Forward:** Turn the throttle grip to reduce engine speed. When the engine reaches trolling speed, quickly pull the shift lever to the Forward position.
2. **Reverse:** As when shifting to Forward, reduce the engine speed, when the engine reaches trolling speed, quickly push the shift lever to the Reverse position.

3. **E Models**



a - Fully opened
b - Throttle
c - Forward (F)
d - Shift
e - Neutral (N)
f - Reverse (R)
g - Fully closed
h - Neutral warm-up lever
i - Lock button

4. **Forward:** Quickly push the control lever to the Forward (F) position at 32°, where the gear is connected, while lifting up on the lock button located at the bottom of the control lever grip. Further shifting will open the throttle.
5. **Reverse:** Quickly pull the control lever to the Reverse (R) position at 32°, where the gear is connected, while lifting up on the lock button located at the bottom of the control lever grip. Further shifting will open the throttle.

NOTE: *The control lever is inoperative unless the Neutral warm-up lever is in the fully closed position.*

NOTE: *Do not increase the engine speed unnecessarily, when operate the Neutral warm-up lever.*

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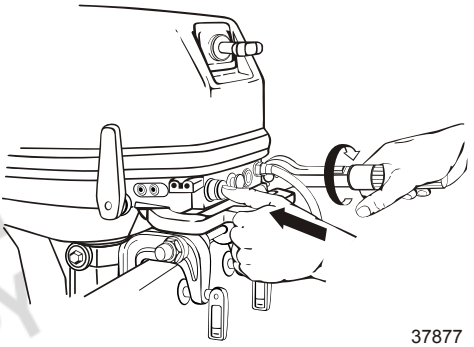
Stopping The Engine

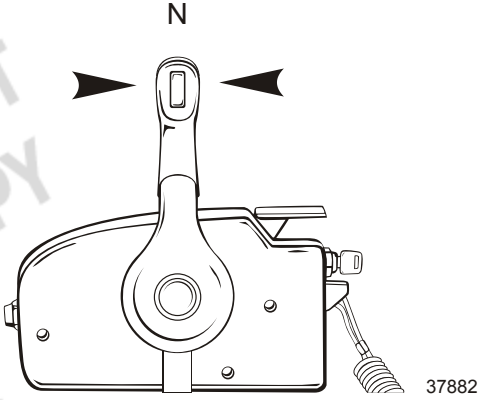
9.9, 15, 18, EH Models

1. Turn the throttle grip to the low speed position.
2. Put the shift lever into Neutral position. Run the engine for 2–3 minutes at idling speed if it has been running at full speed.
3. Push the stop switch to stop the engine.



E Models

1. Put the shift lever into Neutral (N) position and run the engine for 2–3 minutes at idling speed.



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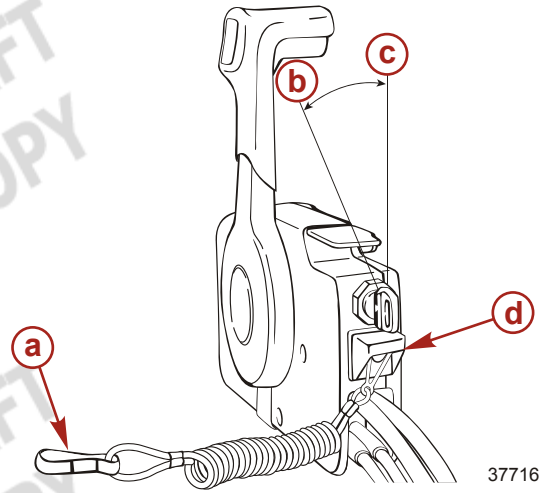
2. Turn the main switch key to the OFF position or pull out the stop switch lock.



a - Hook
b - Off
c - On
d - Lanyard stop switch

IMPORTANT: Please follow the instructions below.

- After stopping the engine, close the air vent screw on the tank cap.
- Disconnect the fuel connector of the engine or the fuel tank.
- Disconnect the battery cable of the EH or E type engine, if the engine will not be used for more than 3 days.

Emergency Starting

If the starter system fails, use the spare starter rope (provided) and follow procedure.

Remove the top cowl and use the spare starter rope (provided) and follow procedure.

1. Pull direct on the starter rope by hand.

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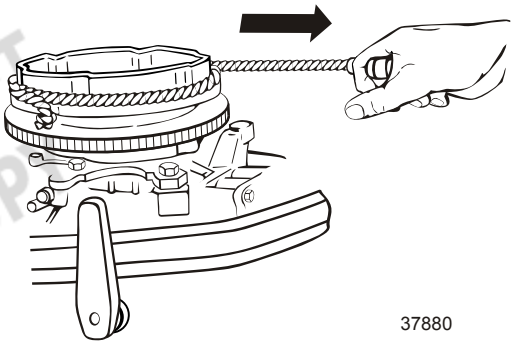
2. Use a 10 mm socket wrench as a handle on the rope.



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⚠ WARNING

High voltage is present any time the key is turned on, especially when starting or operating the engine. Do not touch ignition components or metal test probes and stay clear of spark plug leads when performing live tests.

⚠ WARNING

The exposed moving flywheel can cause serious injury. Keep your hands, hair, clothing, tools, and other objects away from engine when starting or running the engine. Do not attempt to reinstall the flywheel cover or top cowl when engine is running.

MAINTENANCE

Outboard Care

To keep your outboard in the best operating condition, it is important that your outboard receive the periodic inspections and maintenance listed in the **Inspection and Maintenance Schedule**. We urge you to keep it maintained properly to ensure the safety of you and your passengers, and retain its dependability.

Record maintenance performed in the **Maintenance Log** at the back of this book. Save all maintenance work orders and receipts.

SELECTING REPLACEMENT PARTS FOR YOUR OUTBOARD

We recommend using original Mercury Precision or Quicksilver replacement parts and Genuine Lubricants.

Inspection and Maintenance Schedule

BEFORE EACH USE

- Check that lanyard stop switch stops the engine.
- Visually inspect the fuel system for deterioration or leaks.
- Check outboard for tightness on transom.
- Check steering system for binding or loose components.
- Remote control models - Visually check steering link rod fasteners for proper tightness. See **Steering Link Rod Fasteners**.
- Check propeller blades for damage.

AFTER EACH USE

- Flush out the outboard cooling system if operating in salt or polluted water. See **Flushing the Cooling System**.
- Wash off all salt deposits and flush out the exhaust outlet of the propeller and gearcase with fresh water if operating in saltwater.

EVERY 100 HOURS OF USE OR ONCE YEARLY, WHICHEVER OCCURS FIRST

- Lubricate all lubrication points. Lubricate more frequently when used in saltwater. See **Lubrication Points**.

- Inspect and clean spark plugs. See **Spark Plug Inspection and Replacement**.
- Check fuel line filter for contaminants. See **Fuel System**.
- Check carburetor adjustments, if required. See **Carburetor Adjustments**.
- Check corrosion control anodes. Check more frequently when used in saltwater. See **Corrosion Control Anodes**.
- Drain and replace gearcase lubricant. See **Gearcase Lubrication**.
- Lubricate splines on the driveshaft and shift shaft.[1]
- Electric start models - Inspect battery. See **Battery Inspection**.
- Remote control models - Check control cable adjustments.[1]
- Remove engine deposits with Mercury Precision or Quicksilver Power Tune Engine Cleaner.
- Check tightness of bolts, nuts, and other fasteners.
- Clean fuel tank pick up filter.

EVERY 300 HOURS OF USE OR THREE YEARS

- Replace water pump impeller (more often if overheating occurs or reduced water pressure is noted).[1]

BEFORE PERIODS OF STORAGE

- Refer to Storage procedure. See **Storage** section.

Flushing The Cooling System

Flush the internal water passages of the outboard with fresh water after each use in salt, polluted, or muddy water. This will help prevent a buildup of deposits from clogging the internal water passages.

Use a Mercury Precision or Quicksilver accessory (or equivalent) flushing attachment.

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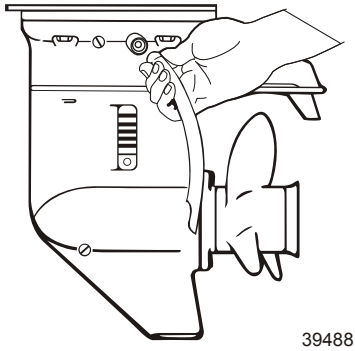
1. These items should be serviced by an authorized dealer.

⚠ WARNING

Rotating propellers can cause serious injury or death. Never operate the boat out of the water with a propeller installed. Before installing or removing a propeller, place the drive unit in neutral and engage the lanyard stop switch to prevent the engine from starting. Place a block of wood between the propeller blade and the anti-ventilation plate.

1. Remove propeller. Refer to **Propeller Replacement**. Remove the water plug from the motor, and screw in the flushing attachment (hose adapter).
2. Connect a hose to the flushing attachment to flush out the inside of the motor with water. (Be sure to seal the water strainer and sub water strainer, located in the gear case, with tape.)



39488

3. With the shift lever in Neutral (N), run the engine at a low speed while flushing the cooling system to ensure all sea water and mud are removed.
4. Check for a steady stream of water flowing out of the water pump indicator hole. Continue flushing the outboard for 3 to 5 minutes, carefully monitoring water supply at all times.
5. Stop the engine, turn off the water, and remove the flushing attachment. Reinstall the propeller.

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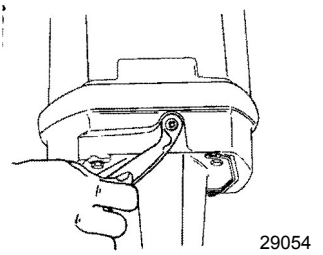
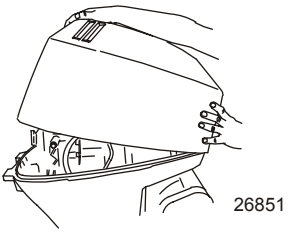
Top Cowl Removal and Installation

REMOVAL

1. Unlock the rear latch by pushing lever down.



2. Lift rear of cowl and disengage front hook.



INSTALLATION

1. Engage the front hook and push cowl back over the cowl seal.
2. Push cowl down and move the rear latch lever up to lock.

Battery Inspection

The battery should be inspected at periodic intervals to ensure proper engine starting capability.

IMPORTANT: Read the safety and maintenance instructions which accompany your battery.

1. Turn off the engine before servicing the battery.
2. Make sure the battery is secure against movement.
3. Battery cable terminals should be clean, tight, and correctly installed. Positive to positive and negative to negative.
4. Make sure the battery is equipped with a nonconductive shield to prevent accidental shorting of battery terminals.

Fuel System

⚠ WARNING

Fuel is flammable and explosive. Ensure the key switch is off and the lanyard is positioned so that the engine cannot start. Do not smoke or allow sources of spark or open flame in the area while servicing. Keep the work area well ventilated and avoid prolonged exposure to vapors. Always check for leaks before attempting to start the engine and wipe up any spilled fuel immediately.

Before servicing any part of the fuel system, stop the engine and disconnect the battery. Drain the fuel system completely. Use an approved container to collect and store fuel. Wipe up any spillage immediately. Material used to contain spillage must be disposed of in an approved receptacle. Any fuel system service must be performed in a well-ventilated area. Inspect any completed service work for sign of fuel leakage.

FUEL LINE INSPECTION

Visually inspect the fuel line and primer bulb for cracks, swelling, leaks, hardness, or other signs of deterioration or damage. If any of these conditions are found, the fuel line or primer bulb must be replaced.

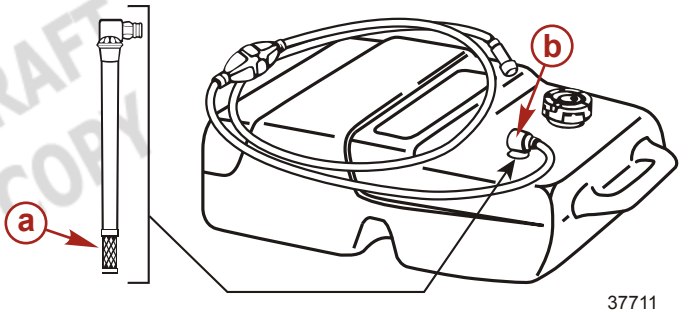
ENGINE FUEL FILTER

Inspect the sight bowl for water accumulation and inspect the filter element for sediment. Clean the filter as follows.

Cleaning the fuel filters and the fuel tank

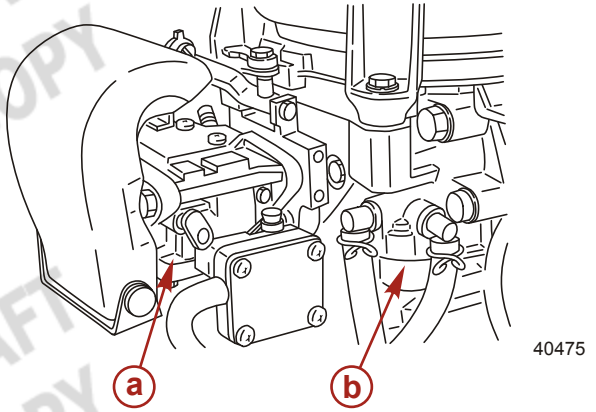
Fuel filters are provided inside the fuel tank and engine.

1. **Fuel tank filter:** Loosen the fuel pickup elbow shown, remove it and clean the fuel filter.



a - Filter **b -** Fuel pickup elbow

2. **Engine filter:** Remove cap, then clean the fuel filter in the engine.



a - Carburetor **b -** Fuel filter

3. **Fuel tank:** Water or dirt in the fuel tank may cause engine trouble. Clean the tank at specified times or after the motor has been store for a long period. (over three months).

IMPORTANT: Visually inspect for fuel leakage from the filter by squeezing the primer bulb until firm, forcing fuel into the filter.

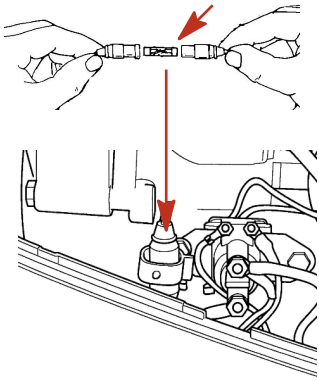
Exterior Care

Your outboard is protected with a durable baked enamel finish. Clean and wax often using marine cleaners and waxes.

Fuse Replacement - Electric Start Remote Control Models

IMPORTANT: Always carry spare SFE 20 AMP fuses.

The electric starting circuit is protected from overload by an SFE 20 AMP fuse. If the fuse is blown, the electric starter motor will not operate. Try to locate and correct the cause of the overload. If the cause is not found, the fuse may blow again. Replace fuse with a fuse of the same rating

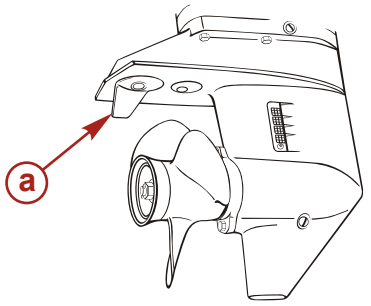


3036

Replacing the anodes

The outboard has a corrosion control anode installed on the gearcase. An anode helps protect the outboard against galvanic corrosion by sacrificing its metal to be slowly eroded instead of the outboard metals.

Two anodes are fitted at the gear case and the mount bracket. When the anodes has been eroded more than 2/3, replace it immediately.



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a - Anode/Trim tab

IMPORTANT: Please follow the instructions below.

1. **Never grease or paint the node.**
2. **At each inspection, retighten the anode fixing bolt, as it is likely to be subjected to electrolytic corrosion.**

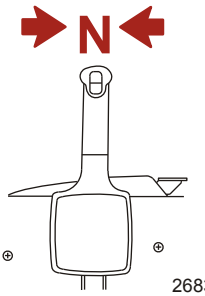
Propeller Replacement

⚠ WARNING

Rotating propellers can cause serious injury or death. Never operate the boat out of the water with a propeller installed. Before installing or removing a propeller, place the drive unit in neutral and engage the lanyard stop switch to prevent the engine from starting. Place a block of wood between the propeller blade and the anti-ventilation plate.

1. Shift outboard to neutral (N) position.

28577



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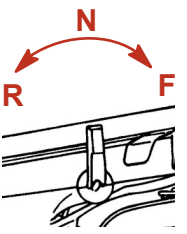

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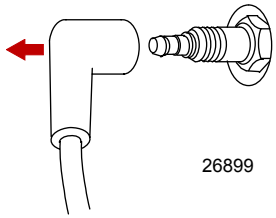
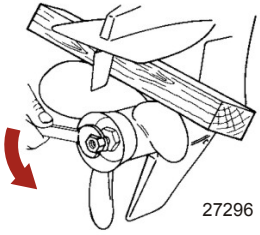
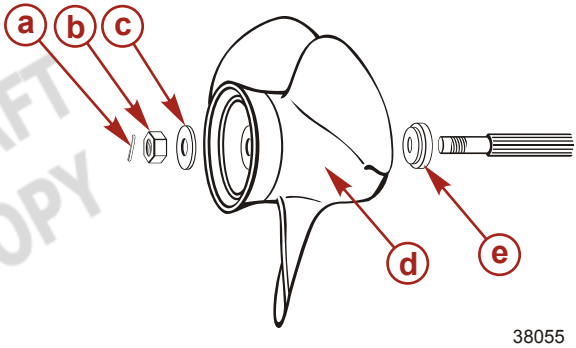
2. Remove the spark plug leads to prevent engine from starting.



3. Place a block of wood between gearcase and propeller to hold propeller and remove propeller nut.



4. Pull propeller straight off shaft. If propeller is seized to the shaft and cannot be removed, have the propeller removed by an authorized dealer.



a - Cotter pin
b - Nut
c - Washer
d - Propeller
e - Thrust hub

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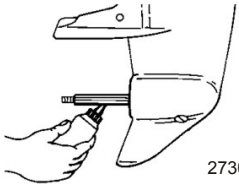
5. Coat the propeller shaft with Quicksilver or Mercury Precision Lubricants Anti-Corrosion Grease or 2-4-C with Teflon.



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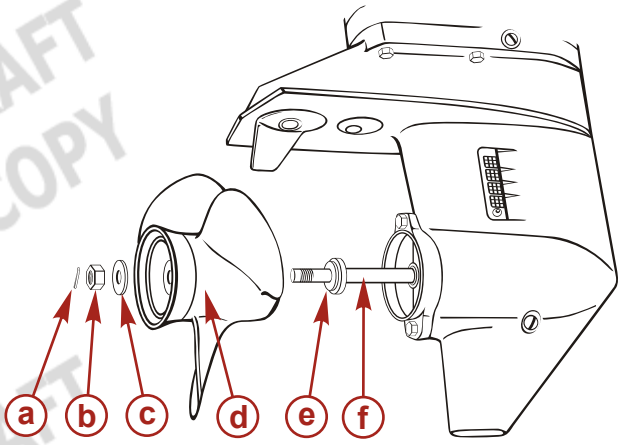
Tube Ref No.	Description	Where Used	Part No.
94	Anti-Corrosion Grease	Propeller shaft	92-802867Q 1
95	2-4-C with Teflon	Propeller shaft	92-802859A 1

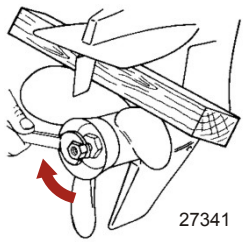
IMPORTANT: To prevent the propeller hub from corroding and seizing to the propeller shaft (especially in salt water), always apply a coat of the recommended lubricant to the entire propeller shaft at the recommended maintenance intervals, and also each time the propeller is removed.

6. Install forward thrust hub, propeller, rear thrust hub, propeller nut, and cotter pin onto the shaft.



a - Cotter pin
b - Nut
c - Washer
d - Propeller
e - Propeller thrust hub
f - Propeller shaft

7. Place a block of wood between gearcase and propeller and tighten propeller nut.



8. Reinstall spark plug leads.

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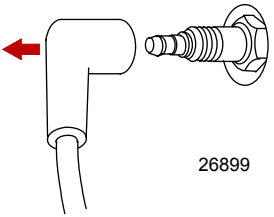
Spark Plug Inspection And Replacement

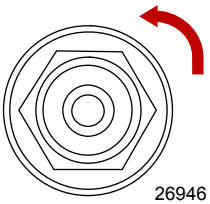
⚠ WARNING

Damaged spark plug boots may emit sparks which can ignite fuel vapors under the engine cowl, resulting in serious injury or death from a fire or explosion. To avoid damaging the spark plug boots, do not use any sharp object or metal tool to remove the spark plug boots.

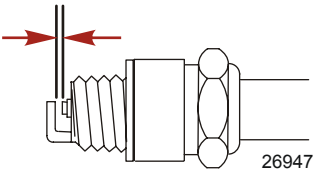
1. Remove the spark plug leads. Twist the rubber boots slightly and pull off.



2. Remove the spark plugs to inspect. Replace spark plug if electrode is worn or the insulator is rough, cracked, broken, blistered or fouled.



3. Set the spark plug gap (0.9–1.0 mm).



Spark Plug
NGK B7HS-10 or BR7HS-10 or recommended ones (Champion L 82 or RL 82 C with 1.0 mm gap)

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4. Before installing spark plugs, clean off any dirt on the spark plug seats. Install plugs finger tight, and then tighten 1/4 turn or torque to specifications.

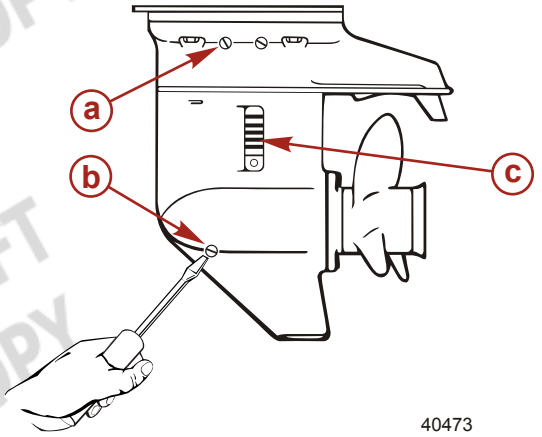
Description	Nm	lb. in.	lb. ft.
Spark plug	27		20

Lubrication Points

Only let an authorized Mercury service shop perform service or maintenance on this product. Be sure to use genuine parts, genuine lubricants, or recommended lubricants.

Changing gear oil

1. Place the outboard in a vertical operating position.
2. Place a drain pan below the outboard.
3. Remove the oil plugs (upper and lower) and drain the gear oil completely.



a - Upper oil plug
b - Lower oil plug
c - Water strainer

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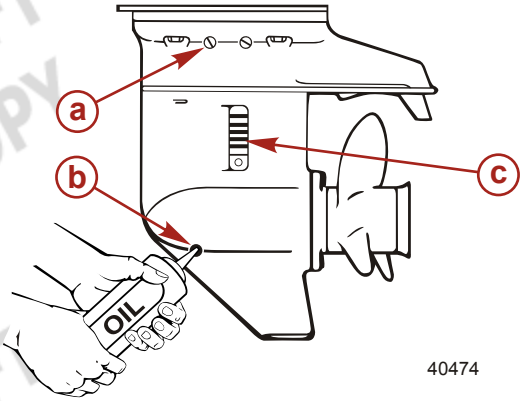
4. Insert the oil tube nozzle into the lower oil plug hole, and fill with gear oil by squeezing the oil tube until oil flows out of the upper plug hole.



a - Upper oil plug
b - Lower oil plug
c - Water strainer

5. Install the upper oil plug, and then remove oil tube nozzle and install the lower oil plug.

IMPORTANT: Use Mercury/Quicksilver gear oil or the recommended one (APL GL-5: SAE #80 to #90). Required volume: Approximate 370 ml (0.10 gal.)

Submerged Outboard

A submerged outboard will require service within a few hours by an authorized dealer once the outboard is recovered from the water. This immediate attention by a servicing dealer is necessary once the engine is exposed to the atmosphere to minimize internal corrosion damage to the engine.

STORAGE

Pre-season check

1. Check the electrolyte level, and measure the voltage and specific gravity of the battery.

Specific Gravity at 20 °C	Terminal Voltage (V)	Charge Condition
1.120	10.5	Fully discharged
1.160	11.1	1/4 charged
1.210	11.7	1/2 charged
1.250	12.0	3/4 charged
1.280	13.2	Fully charged

2. Check that the battery is secure and the battery cables are properly installed.
3. Check that the shift and throttle function properly. Be sure to turn the propeller shaft when checking the shift function or else the shift linkage may be damaged.

Storage Preparation

The major consideration in preparing your outboard for storage is to protect it from rust, corrosion, and damage caused by freezing of trapped water.

The following storage procedures should be followed to prepare your outboard for out of season storage or prolonged storage (two months or longer).

NOTICE

Without sufficient cooling water, the engine, the water pump, and other components will overheat and suffer damage. Provide a sufficient supply of water to the water inlets during operation.

FUEL SYSTEM

IMPORTANT: Gasoline containing alcohol (ethanol or methanol) can cause a formation of acid during storage and can damage the fuel system. If the gasoline being used contains alcohol, it is advisable to drain as much of the remaining gasoline as possible from the fuel tank, remote fuel line, and engine fuel system.

STORAGE

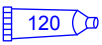
Fill the fuel tank and engine fuel system with treated (stabilized) fuel to help prevent formation of varnish and gum. Proceed with the following instructions.

- Portable fuel tank - Pour the required amount of gasoline stabilizer (follow instructions on container) into fuel tank. Tip fuel tank back and forth to mix stabilizer with the fuel.
- Permanently installed fuel tank - Pour the required amount of gasoline stabilizer (follow instructions on container) into a separate container and mix with approximately 1 liter (1 U.S. quart) of gasoline. Pour this mixture into fuel tank.
- Place the outboard in water or connect flushing attachment for circulating cooling water. Run the engine for ten minutes to fill the engine fuel system.

Flushing Device	91-44357Q 2
9192	Attaches to the water intakes; provides a fresh water connection when flushing the cooling system or operating the engine.

Protecting External Outboard Components

- Lubricate all outboard components listed in **Maintenance - Inspection and Maintenance Schedule**.
- Touch up any paint nicks. See your dealer for touch-up paint.
- Spray Quicksilver or Mercury Precision Lubricants Corrosion Guard on external metal surfaces (except corrosion control anodes).

Tube Ref No.	Description	Where Used	Part No.
 120	Corrosion Guard	External metal surfaces	92-802878 55

STORAGE

Protecting Internal Engine Components

NOTE: *Make sure the fuel system has been prepared for storage. Refer to Fuel System, preceding.*

IMPORTANT: Refer to Maintenance - Spark Plug Inspection and Replacement for correct procedure for removing spark plug boots.

- Place the outboard in water or connect flushing attachment for circulating cooling water. Start the engine and let it run in neutral to warm up.
- With engine running at fast idle, stop the fuel flow by disconnecting the remote fuel line. When engine begins to stall, quickly spray Quicksilver or Mercury Precision Lubricants Storage Seal into carburetor until engine stops from lack of fuel.
- Remove the spark plugs and inject a five second spray of storage seal around the inside of the cylinder.
- Rotate the flywheel manually several times to distribute the storage seal in the cylinder. Reinstall spark plug.

Gearcase

- Drain and refill the gearcase lubricant (refer to **Gearcase Lubrication**).

Positioning Outboard for Storage

Store outboard in an upright (vertical) position to allow water to drain out of the outboard.

NOTICE
Storing the outboard in a tilted position can damage the outboard. Water trapped in the cooling passages or rain water collected in the propeller exhaust outlet in the gearcase can freeze. Store the outboard in the full down position.

Battery Storage

- Follow the battery manufacturer's instructions for storage and recharging.

STORAGE

- Remove the battery from the boat and check water level. Recharge if necessary.
- Store the battery in a cool, dry place.
- Periodically check the water level and recharge the battery during storage.

TROUBLESHOOTING

Starter Motor Will Not Crank The Engine (Electric Start Models)

POSSIBLE CAUSES

- Remote control models - Blown 20 amp fuse in the starting circuit. Refer to **Maintenance** section.
- Outboard is not shifted to neutral position.
- Weak battery or battery connections are loose or corroded.
- Ignition key switch failure.
- Wiring or electrical connection faulty.
- Starter motor or starter solenoid failure.

Engine Will Not Start

POSSIBLE CAUSES

- Lanyard stop switch not in "RUN" position.
- Incorrect starting procedure. Refer to **Operation** section.
- Old or contaminated gasoline.
- Engine flooded. Refer to **Operation** section.
- Fuel is not reaching the engine.
  a. Fuel tank is empty.
  b. Fuel tank vent not open or restricted.
  c. Fuel line is disconnected or kinked.
  d. Primer bulb not squeezed.
  e. Primer bulb check valve is faulty.
  f. Fuel filter is obstructed. Refer to **Maintenance** section.
  g. Fuel pump failure.
  h. Fuel tank filter obstructed.
- Ignition system component failure.
- Spark plugs fouled or defective. Refer to **Maintenance** section.

TROUBLESHOOTING

Engine Runs Erratically

POSSIBLE CAUSES

- Spark plugs fouled or defective. Refer to **Maintenance** section.
- Incorrect setup and adjustments.
- Fuel is being restricted to the engine.
  - Engine fuel filter is obstructed. Refer to **Maintenance** section.
  - Fuel tank filter obstructed.
  - Stuck anti-siphon valve on built in fuel tank.
  - Fuel line is kinked or pinched.
- Fuel pump failure.
- Ignition system component failure.

Performance Loss

POSSIBLE CAUSES

- Throttle not fully open.
- Damaged or improper size propeller.
- Incorrect engine timing, adjustments, or setup.
- Boat overloaded or load improperly distributed.
- Excessive water in bilge.
- Boat bottom is dirty or damaged.

Battery Will Not Hold Charge

POSSIBLE CAUSES

- Battery connections are loose or corroded.
- Low electrolyte level in battery.
- Worn out or inefficient battery.
- Excessive use of electrical accessories.
- Defective rectifier, alternator, or voltage regulator.

OWNER SERVICE ASSISTANCE

Local Repair Service

Always return your outboard to your local authorized dealer should the need for service arise. Only he has the factory trained mechanics, knowledge, special tools, equipment, and genuine parts and accessories to properly service your engine should the need occur. He knows your engine best.

Service Away from Home

If you are away from your local dealer and the need arises for service, contact the nearest authorized dealer. Refer to the Yellow Pages of the telephone directory. If, for any reason, you cannot obtain service, contact the nearest Mercury Marine Service Office.

Parts and Accessories Inquiries

All inquiries concerning genuine replacement parts and accessories should be directed to your local authorized dealer. The dealer has the necessary information to order parts and accessories for you. When inquiring on parts and accessories, the dealer requires the model and serial number to order the correct parts.

Service Assistance

Your satisfaction with your outboard product is very important to your dealer and to us. If you ever have a problem, question or concern about your outboard product, contact your dealer or any authorized Mercury Marine dealership. If additional assistance is required, take these steps.

1. Talk with the dealership's sales manager or service manager. If this has already been done, then contact the owner of the dealership.
2. Should you have a question, concern, or problem that cannot be resolved by your dealership, please contact Mercury Marine Service Office for assistance. Mercury Marine will work with you and your dealership to resolve all problems.

The following information will be needed by the service office:

- Your name and address
- Daytime telephone number

OWNER SERVICE ASSISTANCE

- Model and serial number of your outboard
- The name and address of your dealership
- Nature of problem

Mercury Marine Service Offices

For assistance, call, fax, or write. Please include your daytime telephone number with mail and fax correspondence.

United States		
Telephone	(920) 929-5040	Mercury Marine W6250 W. Pioneer Road P.O. Box 1939 Fond du Lac, WI 54936-1939
Fax	(920) 929-5893	
Website	www.mercurymarine.com	

Canada		
Telephone	(905) 567-6372	Mercury Marine Ltd. 2395 Meadowpine Blvd. Mississauga, Ontario L5N 7W6 Canada
Fax	(905) 567-8515	

Australia, Pacific		
Telephone	(61) (3) 9791-5822	Mercury Marine Australia 132-140 Frankston Road Dandenong, Victoria 3164 Australia
Fax	(61) (3) 9793-5880	

Europe, Middle East, Africa		
Telephone	(32) (87) 32 • 32 • 11	Marine Power - Europe, Inc. Parc Industriel de Petit-Rechain B-4800 Verviers, Belgium
Fax	(32) (87) 31 • 19 • 65	

Mexico, Central America, South America, Caribbean		
Telephone	(954) 744-3500	Mercury Marine 11650 Interchange Circle North Miramar, FL 33025 U.S.A.
Fax	(954) 744-3535	

OWNER SERVICE ASSISTANCE

Japan		
Telephone	81-053-423-2500	Mercury Marine - Japan Anshin-cho 283-1 Hamamatsu Shizuoka-ken, Japan 435-0005 Japan
Fax	81-053-423-2510	

Asia, Singapore		
Telephone	5466160	Mercury Marine Singapore 72 Loyang Way Singapore, 508762
Fax	5467789	

MAINTENANCE LOG

Maintenance Log

Record all maintenance performed on your outboard here. Be sure to save all work orders and receipts.

Date	Maintenance Performed	Engine Hours

Propeller Table

Use a genuine propeller.

A propeller must be selected so that the engine RPM measured at wide open throttle while eruising is within the recommended range: 9.9 = 4500 to 5300 RPM; 15, 18 = 5200 to 5800 RPM.

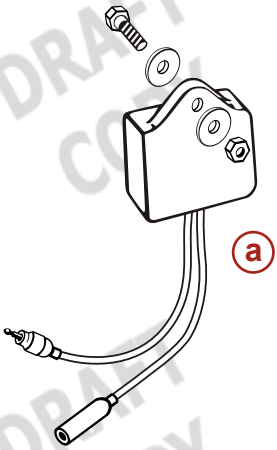
Light boats ---------- Heavy boats							
Size as indicated on propeller		10	9	8.5	8	7	6
Propeller size diameter x pitch		234x250 mm 9.2x9.8 in.	234x231 mm 9.2x9.1 in.	234x224 mm 9.2x8.8 in.	234x199 mm 9.2x7.8 in.	234x174 mm 9.2x6.9 in.	234x155 mm 9.2x6.1 in.
Model	18	optional	S	L	UL	optional	optional
	15	optional	optional	S	L	UL	optional
	9.9	optional	optional	S	L	UL	optional

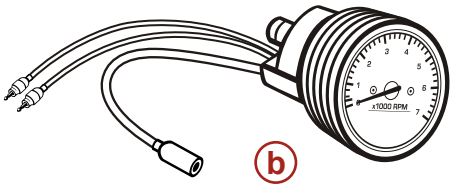
S=short, L=long, UL=extra long: Transom height

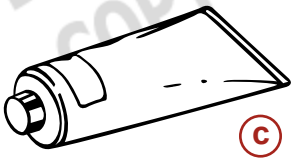
BRP CONFIDENTIAL DRAFT COPY

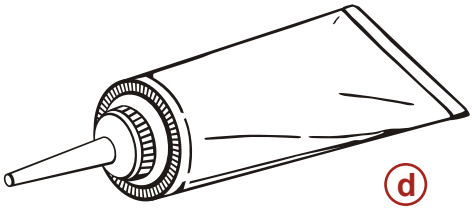
Accessories

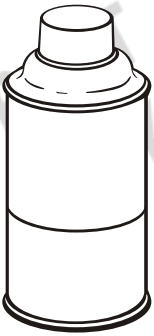
OPTIONAL ACCESSORIES

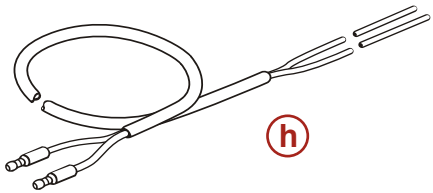












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ACCESSORIES

a - Tachometer unit kit
b - Tachometer
c - Mercury/Quicksilver grease (250 g)
d - Mercury/Quicksilver gear oil (500 mL)
e - Touch-up paint
f - Mercury/Quicksilver engine oil (0.4 L, 1 L, 4 L, 20 L)
g - Flushing attachment
h - Extension cord for light (Lights are available on the market)

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Associated Parts

Name		Quantity	Dimensions
Service tools	Tool bag	1	
	Pliers	1	
	Socket wrench	1	10 x 13 mm
	Socket wrench	1	21 mm
	Socket wrench handle	1	
	Screwdriver	1	
Spare parts	Starter rope	1	1000 mm
	Spark plug	1	NGK B7HS-10 or Champion L82C (Gap: 1.0 mm)
	Cotter pin	1	
Other*	Fuel tank	1	
	Primer bulb	1 set	
	Remote control box	1 set	E Models only
	Remote control attachment	1 set	E Models only

* Not included as standard accessories in some markets.

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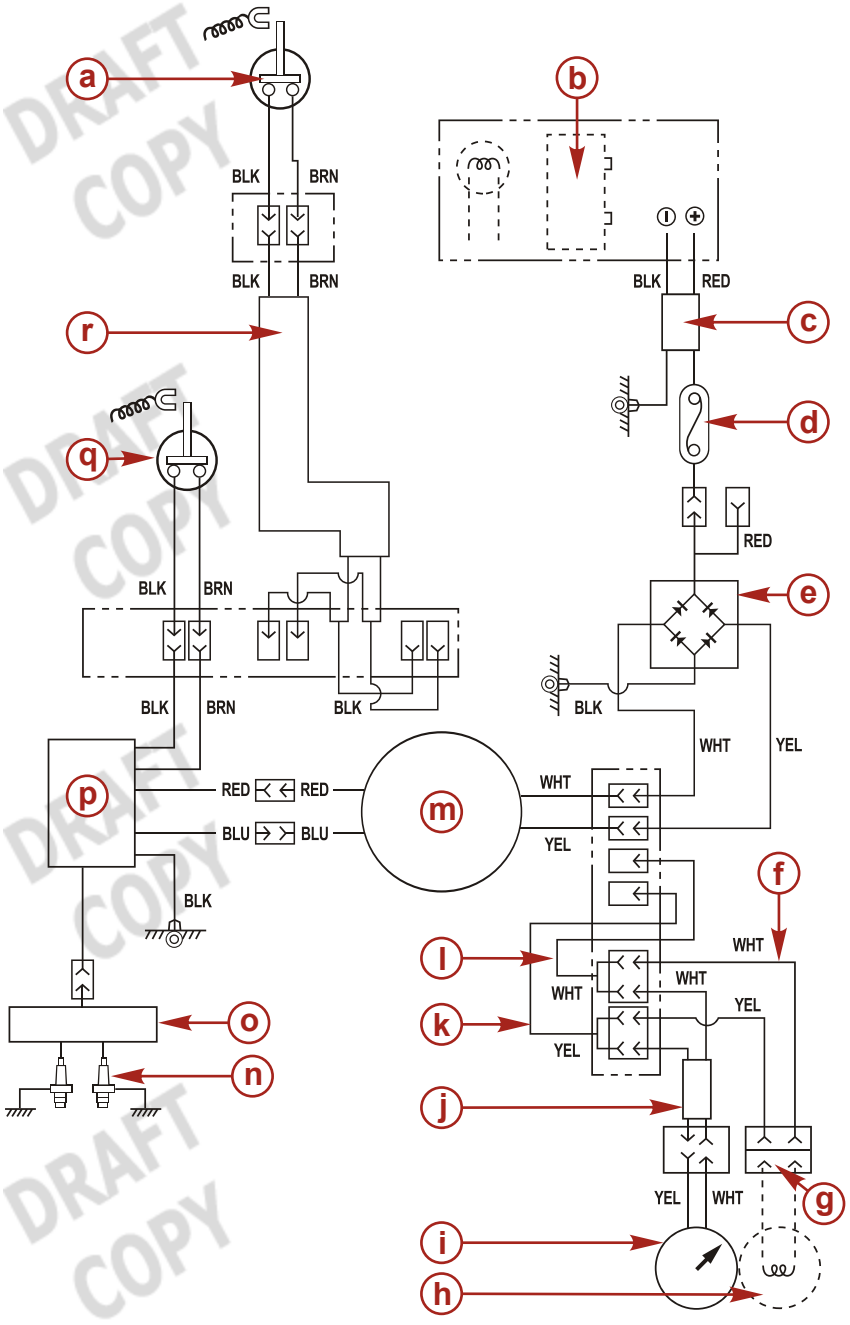
ASSOCIATED PARTS

NOTE:

WIRING DIAGRAMS

9.9, 15, 18



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WIRING DIAGRAMS

a - Remote control box (optional)
b - Battery
c - Extension cord (optional)
d - Fuse
e - Rectifier
f - Extension cord for light (optional)
g - Receptacle plug (optional)
h - Lamp (12V 80W) [AC] (available on the market)
i - Tachometer (optional)
j - Tachometer, lead wire (optional)
k - Separate cord, white (optional)
l - Separate cord, white (optional)
m - Flywheel magneto
n - Spark plug
o - Ignition coil
p - CD unit
q - Stop switch
r - Stop cord (optional)

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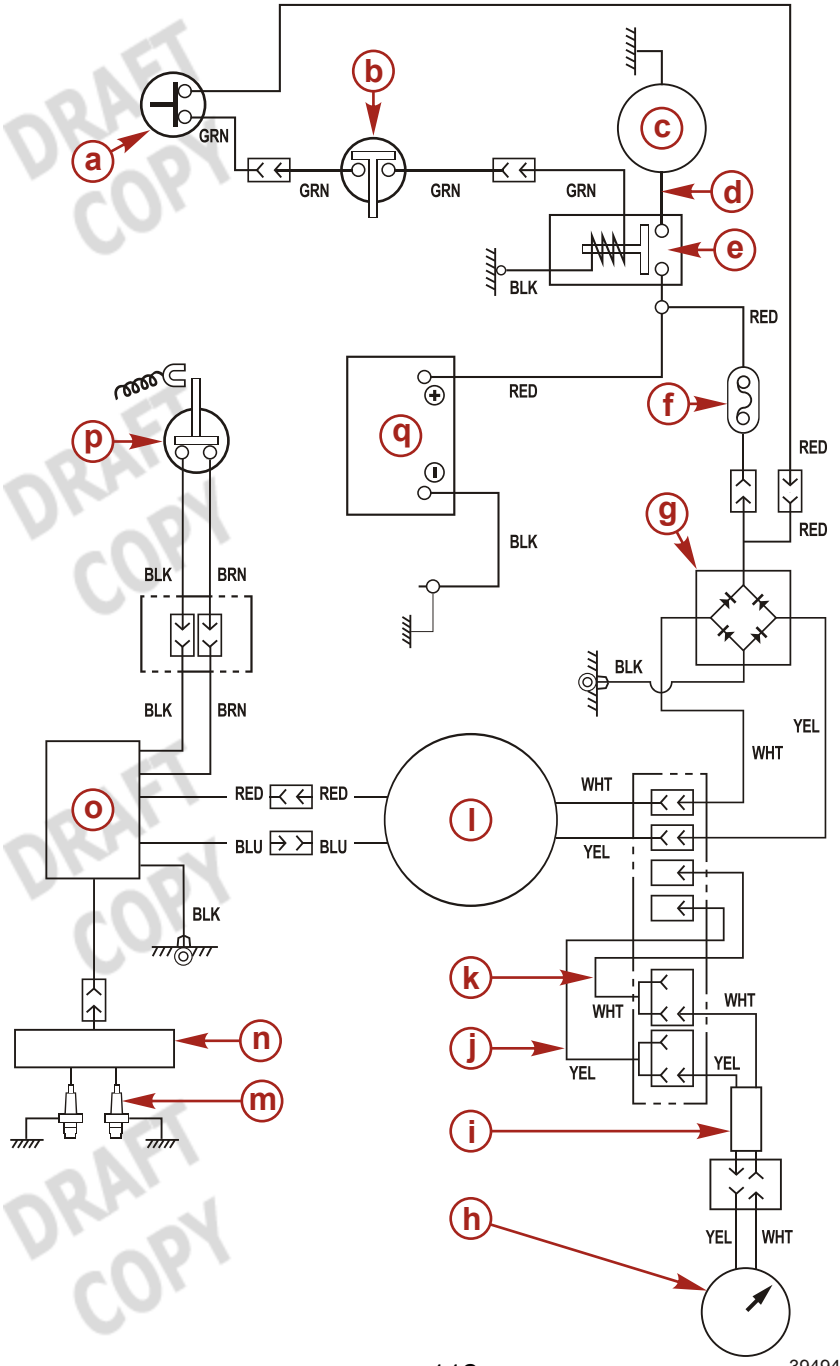
WIRING DIAGRAMS

EH Models



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WIRING DIAGRAMS

a - Main switch
b - Neutral switch
c - Starter motor
d - Starter cord
e - Starter solenoid
f - Fuse
g - Rectifier
h - Tachometer
i - Tachometer lead wire (optional)
j - Separate cord, yellow (optioal)
k - Separate cord, white (optioal)
l - Flywheel magneto
m -Spark plugs
n - Ignition coil
o - CD unit
p - Stop switch
q - 12V 40AH or 12V 70AH (abilable on the market)

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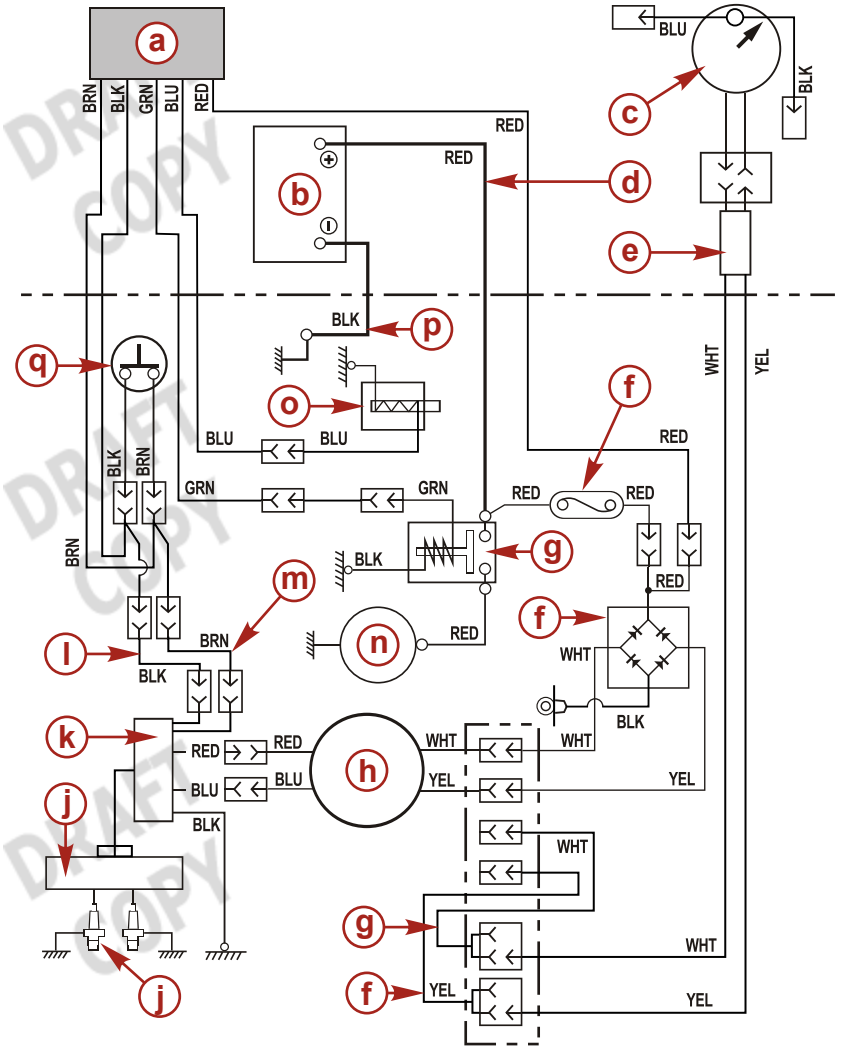
WIRING DIAGRAMS

E Models



WIRING DIAGRAMS

a - Cord assembly
b - 12V 40AH or 12V 70AH battery (available on the market)
c - Tachometer
d - Battery cord (+)
e - Tachometer lead wire (optional)
f - Fuse 15A
g - Starter solenoid
h - Flywheel magneto
i - Spark plugs
j - Ignition coil
k - CD unit
l - Lead wire, black
m - Lead wire, brown
n - Starter moter
o - Choke solenoid
p - Battery cord
q - Stop switch (optional)

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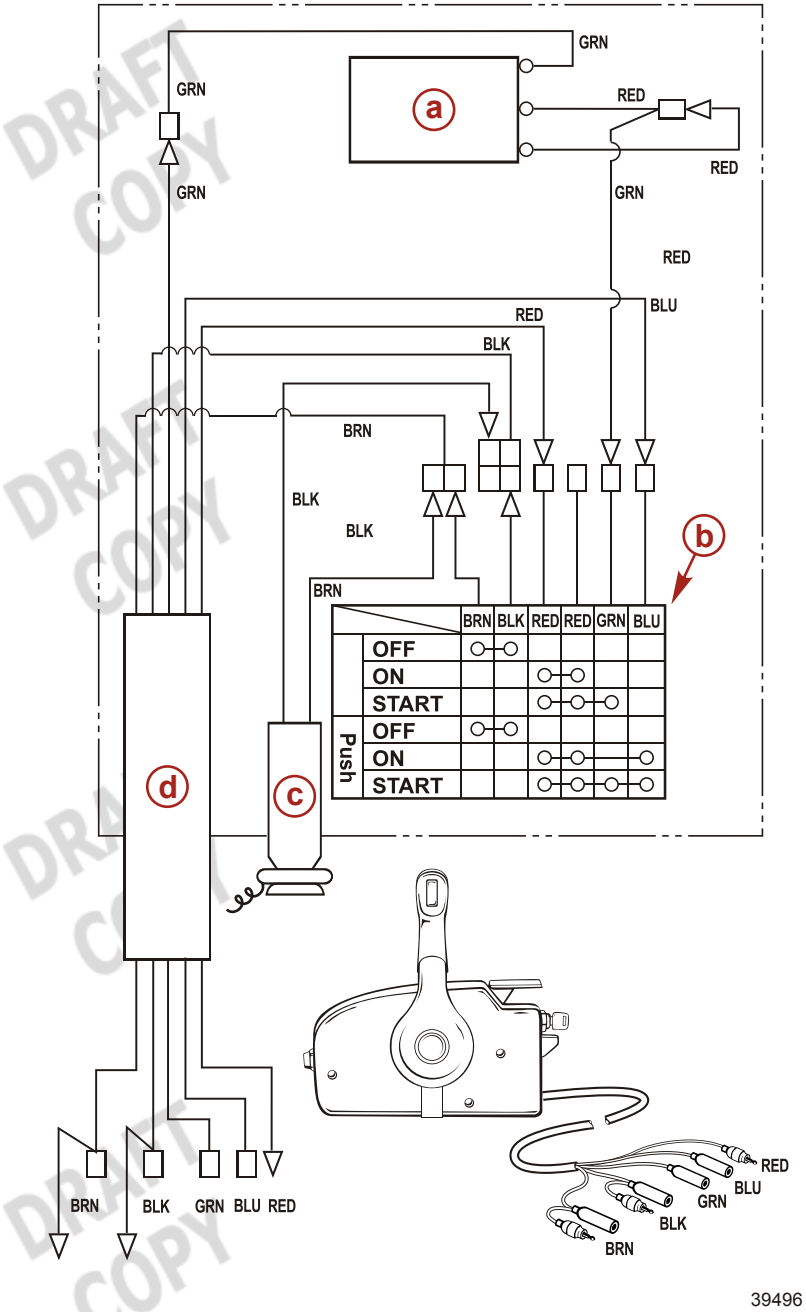
WIRING DIAGRAMS

Single Remote Control Box



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a - Neutral switch
b - Main switch
c - Stop switch
d - Cord assembly

Wire Color Code Abbreviations

Wire Color Abbreviations				
BLK	Black		BLU	Blue
BRN	Brown		GRY	Gray
GRN	Green		ORN or ORG	Orange
PNK	Pink		PPL or PUR	Purple
RED	Red		TAN	Tan
WHT	White		YEL	Yellow
LT or LIT	Light		DK or DRK	Dark